

Ramsar National Report to COP13

Section 1: Institutional Information

Important note: the responses below will be considered by the Ramsar Secretariat as the definitive list of your focal points, and will be used to update the information it holds. The Secretariat's current information about your focal points is available at <http://www.ramsar.org/search-contact>.

Name of Contracting Party

The completed National Report **must be accompanied by a letter** in the name of the Head of Administrative Authority, confirming that this is the Contracting Party's official submission of its COP13 National Report. It can be attached to this question using the "Manage documents" function (blue symbol below)

> REPUBLIC OF KOREA

Designated Ramsar Administrative Authority

Name of Administrative Authority

> Nature and Ecology Policy division, Ministry of Environment

Head of Administrative Authority - name and title

> YOO, Seung-Gwang / Director

Mailing address

> Ministry of Environment, Government Complex-Sejong, 11, Doum 6-Ro, Sejong-si, 30103, Republic of Korea

Telephone/Fax

> +82-44-201-7290 / +82-44-201-7235

Email

> slobbie3@me.go.kr

Designated National Focal Point for Ramsar Convention Matters

Name and title

> WON, Hyelim / Deputy Director

Mailing address

> Ministry of Environment, Government Complex-Sejong, 11, Doum 6-Ro, Sejong-si, 30103, Republic of Korea

Telephone/Fax

> +82-44-201-7237 / +82-44-201-7219

Email

> hyelim21@korea.kr

Designated National Focal Point for Matters Relating to The Scientific and Technical Review Panel (STRP)

Name and title

> YEOM, Jung-hun

Name of organisation

> National Wetlands Center

Mailing address

> 38, ISAN-GIL, IBANG-MYEON, CHANGNYEONG-GUN, GYEONGSANGNAM-DO, 50303, REPUBLIC OF KOREA

Telephone/Fax

> 82-55-530-5533/82-55-530-5540

Email

> zelkovayeum@gmail.com

Designated Government National Focal Point for Matters Relating to The Programme on Communication, Education, Participation and Awareness (CEPA)

Name and title

> LEE, Hyun-ju

Name of organisation

> National Wetlands Center

Mailing address

> 38, ISAN-GIL, IBANG-MYEON, CHANGNYEONG-GUN, GYEONGSANGNAM-DO,
50303, REPUBLIC OF KOREA

Telephone/Fax

> 82-55-530-5533/82-55-530-5540

Email

> wetlandkorea@gmail.com

Designated Non-Government National Focal Point for Matters Relating to The Programme on Communication, Education, Participation and Awareness (CEPA)

Name and title

> JANG, Ji-Young

Name of organisation

> Eco Horizon Institute

Mailing address

> 22, 22gil, Seongmisan-ro, Mapo-gu, Seoul,03988, Republic of Korea

Telephone/Fax

> +82-2-338-9572 / +82-2-338-9575

Email

> ecojangjy@gmail.com

Section 2: General summary of national implementation progress and challenges

In your country, in the past triennium (i.e., since COP12 reporting)

A. What have been the five most successful aspects of implementation of the Convention?

- 1)
 - › New sites included in the Ramsar List and/or designated as Wetland Protection Areas
- 2)
 - › The 3rd Master Plan for Wetland Conservation formulated
- 3)
 - › Pilot projects for the Wetland City Accreditation of the Ramsar Convention scheme successfully implemented and nominations of candidate cities submitted for being accredited as Wetland City
- 4)
 - › National Wetland Inventory established, updated and made available to the public
- 5)
 - › Wetland Management mechanisms improved through Assessment of Wetland PA Management Effectiveness

B. What have been the five greatest difficulties in implementing the Convention?

- 1)
 - › To resolve stakeholder disagreement over establishing new Ramsar Site or extending the area of the existing Ramsar Sites
- 2)
 - › To Integrate and coordinate with other national policies and wetlands conservation policies
- 3)
 - › To set out detailed conservation action plans for conservation and management of each Ramsar Site
- 4)
 - › To improve awareness of the wise use concept and mainstream it into national policy planning

C. What are the five priorities for future implementation of the Convention?

- 1)
 - › To diversity protected area types and to increase coverage of wetland protected areas
- 2)
 - › To enhance the governance mechanism including purchasing private lands that are wetland protected areas and restoring degraded sites
- 3)
 - › To develop wise use index and to identify and promote successful cases
- 4)
 - › To strengthen cooperation with the DPRK including building wetland inventory in the Korean Peninsula
- 5)
 - › To create a guideline for promoting and expanding implementation of the Wetland City Accreditation scheme at the national level

D. Do you (AA) have any recommendations concerning implementation assistance from the Ramsar Secretariat?

› No

E. Do you (AA) have any recommendations concerning implementation assistance from the Convention's International Organisation Partners (IOPs)? (including ongoing partnerships and partnerships to develop)

› No

F. How can national implementation of the Ramsar Convention be better linked with implementation of other multilateral environmental agreements (MEAs), especially those in the 'biodiversity cluster' (Convention on Biological Diversity (CBD), Convention on Migratory Species (CMS), Convention on International Trade in Endangered Species (CITES), World Heritage Convention (WHC), and United Nations Convention to Combat Desertification (UNCCD) and the United Nations Framework Convention on Climate Change (UNFCCC)?

> The establishment and management mechanism for Wetland Protection Area (WPA) and Ramsar Site (as stipulated in the Wetland Conservation Act) provides an instrumental legal framework for the implementation of MEAs, including CBD, CMS and CITES at the national level, as sites designated as WPA and/or Ramsar Site are identified as key areas for conserving biodiversity in Korea. The 3rd Basic Plan for Conservation of Natural Environment 2016-2025 includes, among others, establishing a more strengthened mechanisms for inter-ministerial coordination and collaboration to implement international cooperation and MEAs; and creating an enhanced communication mechanism between MEAs and the focal points of MEAs in Korea. As the recognition of the value of ecosystem services grows, the Ministry of Environment and the Ministry of Oceans and Fisheries are working closely with the Korea Forest Service and the Ministry of Culture, Sports and Tourism to jointly develop and undertake plans to improve wetland ecosystem services, including research and mapping of wetlands nationwide.

G. How can implementation of the Ramsar Convention be better linked with the implementation of water policy/strategy and other strategies in the country (e.g., on sustainable development, energy, extractive industries, poverty reduction, sanitation, food security, biodiversity)?

> The implementation of the Ramsar Convention is a key driver in mainstreaming the conservation and wise use of wetlands through its one of its role in increasing awareness of the importance of wetlands and the need to include new sites in the Ramsar List. In carrying out the integrated management of urban ecosystems in Korea, the conservation and restoration of urban wetlands is instrumental in improving urban biodiversity, generating urban cool island effect, implementing the Low Impact Development(LID) approach and enhanced wastewater treatment. To build a better linkage between Ramsar Sites and integrated urban management, efforts are needed to expand and promote the Wetland City Accreditation scheme.

In Korea, various types of artificial wetlands are considered as important elements in strategic water management planning. Artificial wetlands and their role in pollution abatement have come as a new model for water quality management and have been garnering increased attention among water management authorities, including Ministry of Environment, Ministry of Land, Infrastructure and Transport, and Ministry of Agriculture, Food and Rural Affairs. This trend in policy-making is in line with the key principle of the Ramsar Convention, which, among others, is the wise use concept.

In addition, efforts will be made to establish a traditional knowledge inventory focusing on the Wise Use concept; and a ecotourism and environmental education strategy to bring economic benefits to local communities.

H. Do you (AA) have any other general comments on the implementation of the Convention?

> A framework or mechanism is needed to assess the status and management of wetlands, incorporating the National Report submitted by each Contracting Party to COPs every three years. A National Report can do, by creating new indicators assessing these.

I. Please list the names of the organisations which have been consulted on or have contributed to the information provided in this report

> National Wetland Center of ROK
Korea Maritime Environment Management Corporation

Section 3: Indicator questions and further implementation information

Goal 1. Addressing the drivers of wetland loss and degradation

Target 1

Wetland benefits are featured in national/ local policy strategies and plans relating to key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture, fisheries at the national and local level.

1.1 Have wetland issues/benefits been incorporated into other national strategies and planning processes, including: {1.3.2} {1.3.3} KRA 1.3.i

Please select only one per square.

a) National Policy or strategy for wetland management	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
b) Poverty eradication strategies	<input type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input checked="" type="checkbox"/> Y=Not Relevant
c) Water resource management and water efficiency plans	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
d) Coastal and marine resource management plans	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
e) Integrated Coastal Zone Management Plan	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
f) National forest programmes	<input type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
g) National policies or measures on agriculture	<input type="checkbox"/> A=Yes <input checked="" type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
h) National Biodiversity Strategy and Action Plans drawn up under the CBD	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
i) National policies on energy and mining	<input type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input checked="" type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant

j) National policies on tourism	<input type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
k) National policies on urban development	<input type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
l) National policies on infrastructure	<input type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
m) National policies on industry	<input type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input checked="" type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
n) National policies on aquaculture and fisheries {1.3.3} KRA 1.3.i	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
o) National plans of actions (NPAs) for pollution control and management	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
p) National policies on wastewater management and water quality	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant

1.1 Additional information

> a) The Master Plan for Wetland Conservation (MPWC) sets out the wetland policy framework at the national level. The 2nd MPWC for 2013-2017 included requirements to carry out wetland research and study, implement conservation and management of wetlands and foster the Wise Use concept. The 3rd MPWC for 2018 -2022, under the national wetland vision, "Wetlands for the Future and Wetland Benefits for All", focuses on modernizing wetland research methodologies; strengthening the conservation and management measures; laying a foundation for fulfilling the Wise Use Concept; and implementing wetland-related international agreements and promoting international cooperation and coordination.

c) Wetland issues/benefits are incorporated in the 4th Long-term Comprehensive Water Resource Plan for 2011-2020; river restoration included in the 2nd Master Plan for Water Environment Management for 2016-2025; installation of eco-friendly water quality improvement facilities; and wildlife habitat restoration in wetland and abandoned waterways. The 2nd Integrated Coastal Management Plan (Revised fro 2016-2021) includes the equitable sharing of ecosystem services benefits generated through public-private collaboration in coastal resource management and maximum utilization of coastal zones; and intertidal mudflat restorations that contribute to local economic development. Policies and programmes that have been put into action include eco-tourism programmes that make use of ecological resources in the coastal and ocean areas; and fishery improvement programmes undertaken in the coastal and intertidal mudflat areas that contribute to improving local economy and livelihoods.

d) The amendment to the 2nd Integrated Plan for Coastal Management for 2016-2011 includes actions to strengthen the management of coastal environments through linking the healthy, resilient coastal environment with local economic growth. The Plan includes deployment of artificial reefs that contribute to rebuilding fish stocks and restoration of the closed seasalt farms, which improve the value of coastal ecosystems and the development of coastal and ocean areas.

e) The amendment to the 2nd Integrated Plan for Coastal Management for 2016-2011 aims to enhance the management of coastal environments through improved integrity of coastal areas that contribute to local economy. To achieve its objectives, it sets out measures, such as marine/coastal reforestration; rebuilding fish

stocks through restoration of degraded coastal ecosystems; and contributing to sustainable livelihood and local economy through improving the integrity of coastal environment.

f) The 5th Forest Master Plan for 2008-2017 focuses on identifying and studying mountain wetlands and inland wetlands located in the basin area of the 5 biggest rivers; and conserving key biodiversity area and habitats.

h) The 3rd National Biodiversity Strategy and Action Plan has the objectives of designating new Ramsar Sites; designating habitats functioning as a climate change buffer as protected area; restoring damaged intertidal mud flats; and setting up a mechanism for ecosystem services assessment, including services provided by wetlands.

i) To prevent possible construction of a wind power plant in any intertidal flats and degradation of coastal ecosystems from occurring, efforts have been made to test the feasibility of the planned power plants and develop guidelines.

j) The National Policies on tourism take the Wise Use and ecotourism approach that contributes to wetland conservation and sustainable livelihood, which includes setting off-limit requirements to wetlands during restoration and reaching out to international tourists.

k) The 4th Comprehensive Plan for Land Utilization was revised to include measures to improve waterbodies' ecosystems, including natural wetlands, rivers and farmlands close to major rivers; conserving wetland networks; and ecotourism at wetlands.

m) 'The Industrial Development Act' amended in November 2017 mainly emphasizes sustainable management that reflects economic, environmental, and social issues arising from management activities of most domestic corporations. 'The National Trust Act' enacted and implemented in March 2007 has enabled supports such as tax-relief in order to promote active participation of industries in conservation of natural and environmental assets including wetlands.

n) The amendment to the 2nd Integrated Plan for Coastal Management, the 3rd Master Plan for Wetland Conservation, the Enforcement Plan for Establishing and Management of Total Allowable Catch stipulate national policies regarding seafood productivity and conservation and management of coastal wetlands. These policies focus on developing eco-friendly wild-catch and aquaculture techniques and operating real-time fishery information system.

o) According to the 2nd Comprehensive Measures to Control Non-point Source Pollutants, the Master Plan for Water Environment Management, the water quality are managed and controlled at the basin level (Total Water Pollution Load Management System). The control for point source and non-point source pollution focuses on establishing catchment areas functioning as pollutant filters; creating constructed wetlands for livestock wastewater treatment; and wetland management at the basin levels.

p) The Framework Act on Environmental Policy sets forth the environmental standards for water quality control, by which the government implement the total water quality load management at the basin level and regulates wastewater disposal from industrial facilities. The water quality control policies include operating the water quality monitoring network; creating a manual for control of large-scale water pollution; carrying out communication activities; and assessing the effectiveness of the public wastewater treatment facilities. Future actions include establishing an integrated water management framework; setting up a governance mechanism at the basin levels; managing harmful algal blooms; and water quality control at upstream points of dams.

Target 2

Water use respects wetland ecosystem needs for them to fulfil their functions and provide services at the appropriate scale inter alia at the basin level or along a coastal zone

2.1 Has the quantity and quality of water available to, and required by, wetlands been assessed to support the implementation of the Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands (Resolution VIII.1, VIII.2) ? 1.24.

C=Partially

2.1 Additional Information

> In accordance with the Water Quality and Aquatic Ecosystem Conservation Act and the Marine Environment Management Act, Korea maintains up-to-date information and data on the status of aquatic ecosystems across the nation, including information about the quality and quantity of major rivers, lakes, artificial dams, reservoirs and coastal waters.

In addition, pursuant to the Wetland Conservation Act, Korea carries out in-dept research and study on the status of Wetland Protection Areas every 5 years. For wetlands of high conservation value, but not given a legal protection, in-depth research is also undertaken to assess the status of their aquatic ecosystems, including hydrography, hydrology and quality. Biennially, a comprehensive national research on marine ecosystem is carried out to take precautionary measures to prevent and minimize the impact climate change poses on coastal wetlands. These sets of information are utilized in identifying the impacts of climate change upon the water level and quality at the basin level and elements that have negative impacts on inland and coastal wetlands, and in mitigating and addressing the identified threats to these wetlands.

2.2 Have assessments of environmental flow been undertaken in relation to mitigation of impacts on the ecological character of wetlands (Action r3.4.iv)

C=Partially

2.2 Additional Information

> The River Act in Korea sets out requirements of minimum flow to maintain normal functions and state of rivers by considering the use of river water for daily life, industry, agriculture, environmental improvement, generation of electric power, ship transportation (Article 51 of the Act). The required minimum flow, or in-stream flow, is determined taking into account the ecosystems of the given river, its landscape, recreational use, alternative water sources, quantity of minimum flow and water quality. The minimum flow requirement was applied to 60 sites in 25 rivers in 2006, 1 sites in 2011 and 76 sites in 66 rivers in 2015.

The minimum flow concept in the past focused only on the river's functions in flood protection and water provisioning, but as the society's interest in environment has grown in recent years, more comprehensive environmental flow has gained increase support. In 2016, the Ministry of Environment set up a monitoring framework to apply the environmental flow concept to rivers at the national level, before its full application on the ground. The Ministry also initiated a research work to create an integrated model and scientific guideline for determining environmental flow. The Korea Environment Institute has undertaken a series of research and study regarding environmental flow, including the Study on Water Environment Policy under Changing Water Demand for Environmental Flow and Recreation Water in 2015. The need for environmental flow assessment is growing.

Korea is in an early stage to fully implement the environmental flow concept, especially in terms of technical application and frameworks. But it will build up an effective legal, institutional and policy framework and mechanism for its full implementation, which contributes to creating more resilient, healthy water circulating system at national levels and raising awareness of the functions and services wetlands(river) can provide.

2.3 Have Ramsar Sites improved the sustainability of water use in the context of ecosystem requirements?

C=Partially

2.3 Additional Information

> Most of Ramsar Sites in Korea are designated as Wetland Protection Area and given legal protection. This means improved sustainability of the Ramsar Sites that contributes to providing wildlife habitats and creating sustainable livelihoods for local farmers and fishers.

Dongbaekdongsan (Ramsar Site no. 1947) provides the local community with water resources for irrigation and domestic use. The groundwater recharge is key to water retention and sustaining of site. Since the designation, the local community's awareness of wetland conservation has been raised, and to improve and conserve groundwater recharge, the locals installed rain harvesting tanks for use in agriculture and gardening. The local government has continuously increased the number of rain harvest systems and engaged in wetland ecosystem conservation activities.

Upo Wetland (934) provides water for irrigation, fisheries and habitats for migratory birds, including internationally endangered crested ibis (through a captive-breeding and reintroduction programme). Jangdo Island High Moor (1458) provides locals with water for drinking and domestic use.

2.4 Have the Guidelines for allocation and management of water for maintaining ecological functions of wetlands (Resolutions VIII.1 and XII.12) been used/applied in decision-making processes. (Action 3.4.6.)

A=Yes

2.4 Additional Information

> Water resource management in Korea takes into account sustainability of water and the minimum flow requirements. The water allocation process is in line with the principles in the Guideline (Resolution VIII.1) in general, but minor differences exist in the methodologies taken. The estimate of the minimum flow of a river in natural state is calculated based on the data and information of the river flow in the past. Through comparing the estimate with other estimates taking into account elements for conserving water quality and ecosystems, the estimate of flow that is necessary for maintaining the natural state of the given river and minimizing its effects on the ecosystems is allocated. This figure is incorporated into a river basin-level management plan and a river flow management plan and later is announced by the Ministry of Land, Infrastructure and Transport to the public. For Ramsar Sites, although it is not in line with the plans for other waterbodies, the flow management plan focus on maintaining their functions and pollution control.

2.5 Have projects that promote and demonstrate good practice in water allocation and management for maintaining the ecological functions of wetlands been developed (Action r3.4.ix.)

A=Yes

2.5 Additional Information

> The Ministry of Environment has implemented the mid-term Master Plan for restoring rivers to natural state and ensuring resilient, healthy river and wetland ecosystems since 2016. In 2015, 141 rivers, 100 km total in length, were restored – rivers that were covered by transformation infrastructure; whose channel were straightened by human interventions; and that were polluted by domestic wastewater went through restoration programmes that improve their environmental health and their resilience to natural disasters. Each year, the river restoration project competition is held, giving awards to the best practices of local projects – in 2017 Thancheon in Seongnam City, Anyang Stream in 2016 and Gyeong-an Stream in 2015. Local people near Upo Wetlands demanded increasing the water level of the Ramsar Site for fishing and water resource use, while conservationists stressed the importance of the wetland's functions as providing migratory birds' habitats. To compromise the disagreement, the Nakdong River Basin Environmental Office controlled the water levels. Un-gok Wetlands is a mountain wetland located at low altitude, which intensifies erosion and results in change in its flow rates. The restoration was to maintain the ecological functions of the wetlands. Parts of the High Moor Yongneup was degraded by the adjacent military facilities, which were later moved out of the area and the restoration was carried out to prevent desertification and disturbance to the wetland ecosystems. For coastal wetlands, 9 sites, including closed seasalt farms, closed aquaculture farms and spots where seawater flow is disconnected, have been restored to their previous states – intertidal mudflat habitats in Gochang, Shinan, Taean and Suncheon. Restoration projects focus on coastal ecosystem conservation, rebuilding fish stocks, and enhancing ecosystem services, especially cultural services for ecotourism.

2.6 How many household/municipalities are linked to sewage system? SDG Target 6.3.1.

E=Exact number (households/municipalities)

> 228 municipalities

2.6 Additional Information

> As of 2015, the sewage treatment service is offered by the government-run sewage treatment system to a population of 48,925,049 or 92.9% of the entire population of Korea. The service coverage by municipalities is 99.1% for 7 biggest cities (Metropolitan Cities) including Seoul, 91.2% for smaller cities ("si"), and 67.1% for rural areas (County or "Gun").

2.7 What is the percentage of sewerage coverage in the country? SDG Target 6.3.1.

E=Exact number (percentage)

> 92.9 %

2.7 Additional Information

> The figure is determined by comparing the population who lives in the areas where the sewage treatment system is in place and the total population of the nation.

Sewage coverage = (the population covered by the STS / the total population) * 100

See more at http://www.index.go.kr/potal/main/EachDtlPageDetail.do?idx_cd=1481

2.8 What is the percentage of users of septic tank/pit latrine? SDG Target 6.3.1.

E=Exact number (percentage)

> Septic: 98.6%

Pit: 1.4%

2.8 Additional Information

> According the survey done by the Statistics Korea (KOSTAT), 19,111,731 households or 98.6% use septic tank systems and 261,281 or 1.4% use pit latrine. The number of households that have no in-house sanitation facilities is 1,205.

See more at http://kosis.kr/statHtml/statHtml.do?orgId=101&tblId=DT_1PE1506&conn_path=I2

2.9 Does the country use constructed wetlands/ponds as wastewater treatment technology? SDG Target 6.3.1.

A=Yes

2.9 Additional Information

> The Asterisk 5 and 6 in the Guideline for Constructing a Public Wastewater Treatment System published in 2017 includes recommendations on enhanced functions of natural ponds for treating wastewater, as "eco- and user-friendly" wastewater treatment, and utilizing constructed wetlands and community-level catchments for treating non-point source pollutants.

2.10 How do the country use constructed wetlands/ponds as wastewater treatment technology perform? SDG Target 6.3.1.

C=Functioning

2.10 Additional Information

> Constructed wetlands function as natural filter for treating non-point source pollutants generated from households, constructed roads and highways and agricultural farmlands. One of the objectives of constructing artificial wetlands is to improve water quality through sedimentation, filtration, absorption, microorganism decomposition and wetland plants filtering of non-point source pollutants that especially increase in time of raining. Some of the constructed wetlands have education programmes that offer the public learning opportunities of how treated water contributes to maintaining artificial wetlands.

2.11 How many centralised wastewater treatment plants exist at national level? SDG Target 6.3.1.

E=Exact number (plants)

> 537

2.11 Additional Information

> As of 2016, a total of 537 wastewater treatment facilities (the combined area of 6,641,976□) are in place across the country. For industrial wastewater treatment, 192 facilities are in operation and managed by the Ministry of Environment and local governments.

See more at

http://kosis.kr/statHtml/statHtml.do?orgId=315&tblId=TX_315_2009_H1079&vw_cd=MT_OTITLE&list_id=315_31502_018&scrid=&seqNo=&lang_mode=ko&obj_var_id=&itm_id=&conn_path=E1

2.12 How is the functional status of the wastewater treatment plants? SDG Target 6.3.1.

C=Functioning

2.12 Additional Information

> The Enforcement Decree of the Water Conservation Act (Article 61) defines 3 types of wastewater treatment plants: Public wastewater treatment facilities in industrial complexes, Public wastewater treatment facilities in agri-industrial complexes and Public wastewater treatment facilities for other uses.

Constructed wetlands, ponds and small catchment areas function as natural pollution filters and these includes wetlands in Doriji in Icheon City; Samgye-ri in Yongin City; Namsan-ri in Gongju City; Yangji-ri in Nonsan City; Daegok-ri in Damyang County; and Agok-ri in Jangseong County. Monitoring research found out 90.7% of Total Suspended Solids (TSS) were removed in the constructed wetland in Namsan-ri in Gongju City and in all of the wetlands, about half of the amount of biological oxygen demand, chemical oxygen demand, total nitrogen, and total phosphorus were removed.

2.13 The percentage of decentralized wastewater treatment technology, including constructed wetlands/ponds is? SDG Target 6.3.1.

X=Unknown

2.13 Additional Information

> Some wastewater treatment plants have adjacent wetlands, but it is unclear how many of them are. See more about 47 facilities in place for treating non-point source pollutants at <https://nonpoint.me.go.kr/contentsid/399/index.do>

2.14 Is there a wastewater reuse system? SDG Target 6.3.1.

A=Yes

2.14 Additional Information

> The Act on Promotion and Support of Water Reuse established in 2016 aims to foster the sustainable use of water resources through rain harvesting and reuse of wastewater treated by the Wastewater Reclamation and Reusing System and the Wastewater Treatment System. Of all dewatered sewage sludge treated by the wastewater treatment system in 2016, 61% were reused as fertilizer, solid fuel and soil for reclamation. The treated water was reused for cooling facilities and installations, cleaning streets or other places, chemical dissolution, industrial and agricultural use, maintaining the minimum water level of rivers, etc. Above all, 37,719,031 tons of the treated water, or 35% were reused for industrial use and 12,349,410 tons or 33% for agricultural use.

2.15 What is the purpose of the wastewater reuse system? SDG Target 6.3.1.

R=Agriculture

2.15 Additional Information

Please indicate if the wastewater reuse system is for free or taxed or add any additional information.

> An accurate answer is R, S, and T.

After treatment, the treated wastewater is directly reused for irrigation, industrial use and sanitation. In accordance with the Act on Promotion and Support of Water Reuse, different requirements are used to control water quality for different use. The supports provided by the Act includes cash subsidies or loan for covering part of the cost of installing or constructing a wastewater treatment plant. Local governments are required to reduce the cost for water use or sewage system levied to the owner or the manager of wastewater treatment facilities, or who use water thereof.

Target 3

Public and private sectors have increased their efforts to apply guidelines and good practices for the wise use of water and wetlands. {1.10}

3.1 Is the private sector encouraged to apply the Ramsar wise use principle and guidance (Ramsar handbooks for the wise use of wetlands) in its activities and investments concerning wetlands? {1.10.1}

KRA 1.10.i

A=Yes

3.1 Additional Information

> Korea made available translated versions of Handbook 1 Wise use of Wetlands Handbook 6 Wetland CEPA, Handbook 10 Coastal management and disseminated the Handbooks to governmental agencies, local government and private sectors to encourage them to make use of the translated books.

In 2017, in particular, Korea published "Case studies on wise use of wetlands" that describes wise use examples in Korea in relation to the implementation of the Ramsar Handbook 1.

Through these publications, Korea encourages various stakeholders to apply them to conservation, management and wise use of wetlands.

3.2 Has the private sector undertaken activities or actions for the conservation, wise use and management of {1.10.2} KRA 1.10.ii

Please select only one per square.

a) Ramsar Sites	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant
b) Wetlands in general	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned <input type="checkbox"/> X=Unknown <input type="checkbox"/> Y=Not Relevant

3.2 Additional information

> With an ever-increasing interest in wetlands across the nation, various stakeholders have engaged in ongoing activities related to Ramsar Sites as well as other wetlands at local and national levels. This includes wetland research activities on Ramsar Sites carried out by private actors, including NGOs and ecological interpreters, and requests made by local NGOs to initiate research and study for identifying and mapping undiscovered wetlands. The private actors are taking increasing role in activities to identify new wetlands making use of their on-the-ground knowledge and timely wetland monitoring.

The private sector's role in education and campaign regarding wetlands have also been increasing and expanding. Capacity building programme for local community's participation in wetland protection have been provided to locals, especially who live close to Wetland Protection Areas(WPAs)*. Private actors engage in operation and management of wetland visitor centers, some of which are even outsourced to private operators**. These wetland centers focus on education, participation, promotion and campaign activities for visitors and locals.

* Capacity Building for Locals in the WPAs: this programme encourages locals to participate in wetland conservation and utilize wetlands as natural assets for local communities, through awareness-raising and capacity building activities.

** Honory Wetland Custodian Programme: the custodians hired by the visitor centers provide wetland education and service for visitors.

3.3 Have actions been taken to implement incentive measures which encourage the conservation and

wise use of wetlands? {1.11.1} KRA 1.11.i

A=Yes

3.3 Additional information

> The incentive measures in relation to the conservation and wise use of wetlands fall into three categories: incentives for Ramsar Sites, WPAs and other wetlands.

First, the Pilot project for supporting nomination for Wetland City Accreditation has increase local community's participation and engagement in the conservation and wise use of wetlands. Through the pilot project, 5 candidate sites were provided matching funding by the state and local government.

Second, the representative example of WPA incentive is the compensation programme for fishers during the fishery closures in Upo Wetlands. The eligible fishers receive compensation for closing fisheries and their loss in income, from November to December each year when migratory birds arrive and are present.

Third, in accordance with the Conservation and Management of Marine Ecosystems Act, assessment of conservation, wise use and effective management of Marine Protected Areas in the coastal areas is undertaken. The outcomes of the assessment are used to create incentives of better management of MPAs. Fourth, pursuant to the Act on the Conservation and Use of Biological Diversity, the Biodiversity Management Contract scheme grants incentives for farmers who own agricultural farms in the wetlands that provide key migratory habitats in Korea. During the off-farming season in winter, farmers under the Contract receive the grant for not draining water out of their rice paddy fields or leaving rice straws in the field after harvest, both of which contribute to providing feeding and hiding grounds for migratory birds.

The Cooperation Charge for Ecosystem Conservation levys and collects charge from an operator of development projects which have a substantial impact on the natural environment or ecosystem, or cause a decrease in biological diversity. The collected funds contribute to conserving biodiversity, restoring damaged ecosystems and providing wildlife habitats, including wetlands.

3.4 Have actions been taken to remove perverse incentive measures which discourage conservation and wise use of wetlands? {1.11.2} KRA 1.11.i

B=No

3.4 Additional Information

> Despite continuing discussions between the Ministry of Environment and the Ministry of Agriculture, Food and Rural Affairs on transition to species resources-based agriculture, no tangible conclusion has been reached yet.

Target 4

Invasive alien species and pathways of introduction and expansion are identified and prioritized, priority invasive alien species are controlled or eradicated, and management responses are prepared and implemented to prevent their introduction and establishment.

4.1 Does your country have a comprehensive national inventory of invasive alien species that currently or potentially impact the ecological character of wetlands? {1.9.1} KRA 1.9.i

A=Yes

4.1 Additional information

> As of 2017, in total of 38 species have been included in the invasive alien species inventory so far: 21 by the Ministry of Environment and 17 by the Ministry of Oceans and Fisheries.

The 21 designated by the Ministry of Environment in the Act on the Conservation and Use of Biological Diversity are *Myocastor coypus*, *Rana catesbeiana*, *Trachemys* spp., *Lepomis macrochirus*, *Micropterus salmoides*, *Lycorma delicatula*, *Solenopsis invicta*, *Ambrosia artemisiaefolia* var. *elatior*, *Ambrosia trifida*, *Eupatorium rugosum*, *Paspalum distichum* var. *indutum*, *Paspalum distichum* var. *distichum*, *Solanum carolinense*, *Rumex acetosella*, *Sicyos angulatus*, *Hypochoeris radicata*, *Aster pilosus*, *Solidago altissima*, *Lactuca scariola*, *Spartina alterniflora* and *Spartina anglica*.

As for the 17 designated by the Ministry of Oceans and Fisheries in the Conservation and Management of Marine Ecosystems Act, they are *Dinophysis* spp., *Pseudo-nitzschia* spp., *Alexandrium* spp., *Chattonella* spp., *Cochlodinium polykrikoides*, *Nemopilema nomurai*, *Aurelia aurita*, *Physalia physalis*, *Carybdea brevipedalia*, *Chrysaora pacifica*, *Asterina pectinifera*, *Asterias amurensis*, *Membranipora tuberculata*, *Tricellaria occidentalis*, *Watersipora subovoidea*, *Spartina alterniflora*, and *Spartina anglica*.

4.2 Have national policies or guidelines on invasive species control and management been established or reviewed for wetlands? {1.9.2} KRA 1.9.iii

A=Yes

4.2 Additional information

> Pursuant to Article 21 of the Act on the Conservation and Use of Biological Diversity (revised in February 2013), the Korean government formulates a plan for invasive species control that is required to be updated

every 5 years. In June 2014, the 1st Invasive Species Control Plan for 2014-2018 was created and in the same year, measures to protect native ecosystems from invasive species were put in place. In the plan, wetlands, including Ramsar Sites, are in the list of priority areas in which invasive species are eliminated.

4.3 How many invasive species are being controlled through management actions.

E=Exact number (species)

> 38

4.3 Additional information

If 'Yes', please indicate the year of assessment and the source of the information

> As described in 4.1, the law defines the list of invasive species and the list is to be updated through revision to the law concerning invasive species control. The Act on the Conservation and Use of Biological Diversity (Article 23) requires making available to the public the list of species that cause ecological disturbance, and as of January 2018, 21 species are included in the list and managed accordingly. Jellyfish, included in the list of Invasive Alien Species by the Conservation and Management of Marine Ecosystems Act, are controlled through removal of benthic polyps that produce them. *Spartina alterniflora* and *Spartina anglica*, also designated as Invasive Alien Species by the same act, are monitored by the National Marine Ecosystem Survey and the public reporting system are in place to swiftly remove the plants before expanding to the adjacent ecosystems. For *Spartina alterniflora** inhabiting the southern part of Ganghwa Island, the on-going efforts have been made to remove the species and prevent them from spreading to the surrounding areas, since 2017.

* 17 species of *Spartina alterniflora* have been reported so far and the species were first reported in 2012, being introduced in the southern part of Ganghwa Island and the Yellow Sea.

4.4 Have the effectiveness of wetland invasive alien species control programmes been assessed?

A=Yes

4.4 Additional information

> The Ministry of Environment has implemented a pilot programme to control and eradicate nutria rats. The species were introduced in the late 1980s from Bulgaria for the fur-trade. Abandoned individuals quickly dominates the natural ecosystems and the rapidly increasing population caused extensive damage to the plant community and significant losses to nearby agricultural crops. The species was designated as invasive alien species in 2009. The Nakdong River Basin Environmental Office (Ministry of Environment) has taken measures to control the species population – providing incentives for trapping individuals that reach a body lengths of 20 centimeters (except hunting using bows, firearms and toxin poison). In 2014-2016, a total of 19,256 individuals were eradicated and according to the National Institute of Ecology (MoE) estimated the population dropped from about 8,700 in 2014 to 5,400 in 2016. Building on these experiences, the NRBE Office conducted a research on improving effectiveness of controlling nutrias.

The Ministry of Oceans and Fisheries has conducted since 2016 eradication and control projects on *Spartina anglica* (Common Cordgrass), which terrestrializes tidal flats and degrades native ecosystem and thereby has been designated and controlled by the MOF as a harmful marine species in September 2016. The eradication project took places in 5 habitats of the alien species (Ganghwado, Jindo, Seocheon, Daebudo, and Yeongjongdo) from 2016 to 2017 using environmental-friendly (using without chemical herbicide), while a large-scale management strategy is being developed through long-term planning and results of test-bed research.

Goal 2. Effectively conserving and managing the Ramsar Site network

Target 5

The ecological character of Ramsar Sites is maintained or restored through effective, planning and integrated management {2.1.}

5.1 Have a national strategy and priorities been established for the further designation of Ramsar Sites, using the Strategic Framework for the Ramsar List? {2.1.1} KRA 2.1.i

A=Yes

5.1 Additional information

> Pursuant to the Wetland Conservation Act, the Korean government updates the national Master Plan for Wetland Conservation (MPWC) every 5 years and establish and implement priority actions to designate new Ramsar Sites and/or expand the area of the existing Sites and strengthen their management. The 3rd MPWC for 2018-2020 contains national strategies for expand the total surface area of Ramsar Sites and WPAs, in line with its efforts to achieve the Aichi Biodiversity Target 11. To ensure systematic conservation and management of Ramsar Sites, designating as WPAs are encouraged to precede the application for Ramsar Site designation, but for areas that are not given legal protection, but of ecological importance, Ramsar site designation is encouraged.

For designation of inland wetlands as WPA, monitoring and assessment of national inland wetlands are carried out to enlist wetlands with high conservation status. For the wetlands included in the list, in-depth research are undertaken to shortlist them for WPA designation. In addition, local governments can also identify candidate wetlands and request designation. For coastal wetlands, a 5-year management plan puts national strategies for coastal wetlands of ecological importance for waterbirds into action and includes tailor-made actions customized to conservation and management of coastal wetlands at the local levels.

5.2 Are the Ramsar Sites Information Service and its tools being used in national identification of further Ramsar Sites to designate? {2.2.1} KRA 2.2.ii

A=Yes

5.2 Additional information

> The information provided by the RSIS is of use in setting up the strategic direction for expanding Ramsar Site which is incorporated into the MPWC. The Korean government has a plan to designate new Ramsar Sites using species-based and habitat-based assessment.

5.3 How many Ramsar Sites have an effective, implemented management plan? {2.4.1} KRA 2.4.i

E=Exact number (sites)

> 20

5.4 For how many of the Ramsar Sites with a management plan is the plan being implemented? {2.4.2} KRA 2.4.i

E=Exact number (sites)

> 20

5.5 For how many Ramsar Sites is effective management planning currently being implemented (outside of formal management plans ? {2.4.3} KRA 2.4.i

E=Exact number (sites)

> 0

5.3 - 5.5 Additional information

> A national-level integrated management plan (Ministry of Environment and Ministry of Oceans and Fisheries) is established for sites: The High Moor Yongneup of Mt. Daeam (Ramsar # 898), Upo Wetland (934), Jangdo Wetland (1458), Suncheon Bay (1594), Mulyeongari-oreum Ramsar Site(1648), Du-ung Wetland Ramsar Site (1724), Moojehineup(1725), Muan Tidal Flat (1732), Muljangori-oreum wetland (1847), 1100 Altitude Wetland (1893), Seocheon Tidal Flat (1925), Gochang and Buan Tidal Flats (1937), Dongbaekdongsan (1947), Ungok Wetland (1948), Jeungdo Tidal Flat (1974), Songdo Tidal Flat (2209), Hanbando Wetland Ramsar Site (2226), Dongcheon Estuary (2269), Sumeunmulbaengdui Ramsar Site (2225) and Ganghwa Maehwamareum Habitat(1846). A local-level management plan is set up for Han River-Bamseom Islets (2050). A management plan for Odaesan National Park Wetlands (1848) is part of the Conservation and Management Plan for Odaesan National Park.

5.6 Have all Ramsar sites been assessed regarding the effectiveness of their management (through formal management plans where they exist or otherwise through existing actions for appropriate wetland management ? {1.6.2} KRA 1.6.ii

C=Partially

5.6 Additional information

> Out of all 22 Ramsar Sites in Korea, 19 are given legal protection designated as WPA, 1 as Ecological and Scenery Conservation Area (ESCA) and 1 as a national park. As the CBD Resolution X/31 emphasizes the importance of Management Effectiveness as one of the 10 issues that its Parties are invited to give greater attention. The Resolution stresses the Parties to undertake the management effectiveness assessment for 60% of their Protected Areas and gives the outcomes of the assessment to UNEP-WCMC for integrated management of PA information. To contribute to this international effort, the Korean Government carried out the Management Effectiveness Evaluation (MEE) for 18 WPAs and ESCAs in 2016.

5.7 How many Ramsar Sites have a cross-sectoral management committee? {2.4.4} {2.4.6} KRA 2.4.iv

E=Exact number (sites)

> 11

5.7 Additional information

If at least 1 site, please give the name and official number of the site or sites

> The basin-level regional offices of the Ministry of Environment set up and operate cross-sectoral wetland

management committee for individual wetlands, and so far 10 committees have been in place for wetlands - Upo Wetland (934), Muan Tidal Flat (1732), Suncheon Bay (1594) & Suncheon Dongcheon Estuary (2269), Gochang and Buan Tidal Flats (1937), Jeungdo Tidal Flat (1974), Seocheon Tidal Flat (1925), Songdo Tidal Flat (2209), Ganghwa Maehwamareum Habitat(1846), Hanbando Wetland Ramsar Site (2226) and Du-ung Wetland Ramsar Site (1724).

5.8 For how many Ramsar Sites has an ecological character description been prepared (see Resolution X.15)? {2.4.5}{2.4.7} KRA 2.4.v

E=Exact number (sites)

> 22

5.8 Additional information

If at least 1 site, please give the name and official number of the site or sites

> Ecological character description are prepared for all 22 Ramsar Sites - The High Moor Yongneup of Mt. Daeam (Ramsar # 898), Upo Wetland (934), Jangdo Wetland (1458), Suncheon Bay (1594), Mulyeongari-oreum Ramsar Site(1648), Du-ung Wetland Ramsar Site (1724), Moojehineup(1725), Muan Tidal Flat (1732), Muljangori-oreum wetland (1847), 1100 Altitude Wetland (1893), Seocheon Tidal Flat (1925), Gochang and Buan Tidal Flats (1937), Dongbaekdongsan (1947), Ungok Wetland (1948), Jeungdo Tidal Flat (1974), Songdo Tidal Flat (2209), Hanbando Wetland Ramsar Site (2226), Dongcheon Estuary (2269), Sumeunmulbaengdui Ramsar Site (2225), Ganghwa Maehwamareum Habitat(1846), Han River-Bamseom Islets (2050) and Odaesan National Park Wetlands. For 19 WPAs, in-dept research are required by the Wetland Conservation Act (Article 4) every 5 years.

5.9 Have any assessments of the effectiveness of Ramsar Site management been made? {2.5.1} KRA 2.5.i

A=Yes

5.9 Additional information

If 'Yes' or 'Some sites', please indicate the year of assessment, which assessment tool did you use (e.g. METT, Resolution XII.15, and the source of the information

> To implement the recommendations of the Convention on Biological Diversity, Korea undertook the management effectiveness assessment (MEA) for inland and coastal wetlands and marine protected areas. The MEA tool employed builds on the methodologies the IUCN WCPA's framework for assessing management effectiveness of protected areas. For marine protected areas, a management system has been developed since 2012, incorporating annual MPA management assessment and mid-term MEA for MPAs. R-METT is under consideration for assessing Ramsar Sites in Korea.

A list of wetlands to which MEA was applied: The High Moor Yongneup of Mt. Daeam (Ramsar # 898), Upo Wetland (934), Moojehineup(1725), Mulyeongari-oreum Ramsar Site(1648), Du-ung Wetland Ramsar Site (1724), Jangdo Wetland (1458), 1100 Altitude Wetland (1893), Muljangori-oreum wetland (1847), Dongbaekdongsan (1947), Ungok Wetland (1948), Hanbando Wetland Ramsar Site (2226), Sumeunmulbaengdui Ramsar Site (2225), Muan Tidal Flat (1732), Suncheon Bay (1594), Gochang and Buan Tidal Flats (1937), Seocheon Tidal Flat (1925), Jeungdo Tidal Flat (1974), and Bosung Bulgyo Tidal Flat(1594)

Target 7

Sites that are at risk of change of ecological character have threats addressed {2.6.}.

7.1 Are mechanisms in place for the Administrative Authority to be informed of negative human-induced changes or likely changes in the ecological character of Ramsar Sites, pursuant to Article 3.2? {2.6.1} KRA 2.6.i

A=Yes

7.1 Additional information

If 'Yes' or 'Some sites', please summarise the mechanism or mechanisms established

> The in-depth research is carried out every 5 years to assess the ecosystems of all inland WPAs and the results of the annual research for individual WPAs are presented to AA, the Ministry of Environment (Nature and Ecology Policy Division). For wetlands with no legal protection, the locally-based governmental agencies carry out quarterly monitoring to identify any ecological changes occurred or negative impacts caused, and if any radical changes occurred to wetlands, the agency presents the monitoring report to the given regional office of the Ministry of Environment and advises immediate actions to address the identified changes. Since 2015, regular monitoring activities have been carried out every 2 years to research Marine Protected Areas (MPAs) including coastal WPAs, under the Comprehensive Survey on National Marine Ecosystems. But starting from 2018, the time frame for the survey changes to 1 year to better understand and swiftly respond to the radical environmental change caused by climate change.

7.2 Have all cases of negative human-induced change or likely change in the ecological character of

Ramsar Sites been reported to the Ramsar Secretariat, pursuant to Article 3.2? {2.6.2} KRA 2.6.i

O=No Negative Change

7.2 Additional information

If 'Yes' or 'Some cases', please indicate for which Ramsar Sites the Administrative Authority has made Article 3.2 reports to the Secretariat, and for which sites such reports of change or likely change have not yet been made

> The Ramsar Secretariat requested the Korean government to explain the planned reclamation project in Seocheon Tidal Flat and the wind farm project in Yubu Island. The Ministry of Environment confirmed that the plan to establish a national industry complex in the region for 1989-2007 indeed included the reclamation project. But the agreement was made between the government and the locals to stop the reclamation project and the site in Yubu Island for the intended wind farm project was designated as marine protected area, thus the project was scrapped. The news was informed to the Secretariat. In addition, the site was designated as WPA in 2008 which was followed by its inclusion in the Ramsar List. In 2016, the site was included in the nomination for the World Heritage Site, all of which implied that there have been and will be no development project that cause negative, human-induced change to the site. The Korean government requested at 52nd and 53rd Standing Committee Meetings to delete the site from the list articulated in the SC52-06 Annex 4b and the site was removed from the list at the 53 SC meeting.

7.3 If applicable, have actions been taken to address the issues for which Ramsar Sites have been listed on the Montreux Record, including requesting a Ramsar Advisory Mission? {2.6.3} KRA 2.6.ii

Z=Not Applicable

Goal 3. Wisely Using All Wetlands

Target 8

National wetland inventories have been either initiated, completed or updated and disseminated and used for promoting the conservation and effective management of all wetlands {1.1.1} KRA 1.1.i

8.1 Does your country have a complete National Wetland Inventory? {1.1.1} KRA 1.1.i

A=Yes

8.1 Additional information

> The Korean Government has set up and operated since 2016 the National Wetland Inventory which include the results of research on wetlands across the nation. The inventory is made available to the public, and its geographic information, including location, boundary, surface area and major species are accessible and downloadable from its website at <http://gis.wetland.go.kr>.

8.2 Has your country updated a National Wetland Inventory in the last decade?

A=Yes

8.2 Additional information

> The National Wetland Inventory was created in 2016, incorporating the results of research, study and monitoring of inland and coastal wetlands done from 2000 to 2015 in Korea. The Inventory intends to be updated on a regular basis, if any ecological change occurs and is identified by scientific research. On its website, reports of individual wetland research and other information are available.

8.3 Is wetland inventory data and information maintained? {1.1.2} KRA 1.1.ii

A=Yes

8.3 Additional information

> The update of the National Wetland Inventory is required on a regular basis and the latest update was done in 2016. The Master Plan for Wetland Conservation, pursuant to the Wetland Conservation Act, requires a systematic management of wetland inventory data, including updating data and advancing database.

8.4 Is wetland inventory data and information made accessible to all stakeholders? {1.1.2} KRA 1.1.ii

A=Yes

8.4 Additional information

> The wetland geographic information system is accessible through the National Wetland Inventory at <http://gis.wetland.go.kr>, and it is open to everyone. The information provided through the GIS includes location, wetland types, surface area, photos and dominant species. The GIS file is downloadable.

8.5 Has the condition* of wetlands in your country, overall, changed during the last triennium? {1.1.3}

Please describe on the sources of the information on which your answer is based in the free- text box below. If there is a difference between inland and coastal wetland situations, please describe. If you are able to, please describe the

principal driver(s) of the change(s).

* 'Condition' corresponds to ecological character, as defined by the Convention

Please select only one per square.

a) Ramsar Sites	<input type="checkbox"/> N=Status Deteriorated <input type="checkbox"/> O=No Change <input checked="" type="checkbox"/> P=Status Improved
b) Wetlands generally	<input checked="" type="checkbox"/> N=Status Deteriorated <input type="checkbox"/> O=No Change <input type="checkbox"/> P=Status Improved

8.5 Additional information on a) and/or b)

> Most of the Ramsar Sites in Korea are given legal protection - Wetland Conservation Act, and regular research on their status and biodiversity is carried out. If any changes happen to the Ramsar Sites that are not designated as WPA, Korea updates their information in the RSIS - so far no significant changes have occurred to all Ramsar Sites. There have been ongoing development pressures on wetlands that are designated neither as Ramsar Sites nor WPA, and to address any potential loss or degradation of those wetlands, the conservation and management measures set out in the Master Plan for Wetland Conservation are recommended.

a) Ramsar Site <http://news.joins.com/article/22046586>

In the comparative research done in 2011 and 2016 on the ecological status of Muljangori-oreum wetland (Ramsar # 1847, included in the Ramsar List in 13 Oct 2008 and designated as WPA in 2009), researchers found that the number of species inhabiting the site has increased from 76 in 2011 to 815 in 2016. The 2016 research observed the presence of 175 plant species, 27 bird species, 12 mammals, 9 reptiles and amphibians and 532 inland insects, large benthic invertebrates, and 31 phyto- and zoo-plankton species. It also identified inhabitation of nationally or internationally endangered bird species, such as Falco peregrinus, Accipiter soloensis, Accipiter gularis, Pitta nympha and Terpsiphone atrocaudata, which is higher than the average 3.2 found in the alpine wetlands in Korea. It also found that the site provides the key habitats for breeding for Accipiter soloensis and Terpsiphone atrocaudata.

b) Wetlands generally <http://www.nocutnews.co.kr/news/4737150#csidxd9cd19e5801aa7eae3ff1ec0dda7ac4>

According to the inland wetland research done by the National Wetland Center under the National Institute of Environmental Research, of 734□ of all inland wetland surface areas, 0.46□ were lost due to direct reclamation and development. Additionally rare fauna and flora species are known to face development pressure. In 2016, researchers found that a total of 520 wild species, including nationally endangered Ceratopteris thalictroides, Cicuta, Euryale ferox, Pandion haliaetus and Accipiter soloensis were found to inhabit Baekseokjae Wetland. They also learned that Han River Estuary provides important habitats for a total of 664 species - 242 plant species, including 1 native to the area 95 bird species, including nationally or internationally endangered 16 species and 15 species designated as Natural Monument.

Development pressure on wetlands with no legal protection has increased. For instance, the land development restrictions put on the area that contains Baekseokjae Wetland were lifted gradually from 2014 to 2016. As the results, the area of agricultural farmlands and forests that provide wildlife habitats have declined since then, and the areas of lands, rivers and transportation roads have increased. To address the increasing threats to wetlands, the 3rd MPWC includes plans to apply the No Net Loss Wetland policies; and to highlight the importance of wetlands in land zoning and planning maps.

8.6 Based upon the National Wetland Inventory if available please provide a baseline figure in square kilometres for the extent of wetlands (according to the Ramsar definition) for the year 2017. SDG Target 6.6

E=Exact Number (km²)

> 3,231.2 km²

8.6 Additional information

If the information is available please indicate the % of change in the extent of wetlands over the last three years.

> As of 2017, the total surface area of all wetlands is 3,231.2□, with 734□ of inland wetlands and 2,487.2□ of coastal wetlands, according to the National Wetland Inventory created in 2016. In the past, the wetland extent once decreased mainly due to urban development and coastal reclamation. But as the awareness of conservation and wise use of wetlands has increased, the rate of loss and degradation of wetlands went down and the overall wetland extent across the nation has increased due to numerous wetland restoration projects implemented.

Target 9

The wise use of wetlands is strengthened through integrated resource management at the appropriate scale, inter alia, within a river basin or along a coastal zone {1.3.}.

9.1 Is a Wetland Policy (or equivalent instrument) that promotes the wise use of wetlands in place? {1.3.1}
KRA 1.3.i

If 'Yes', please give the title and date of the policy in the green text box

A=Yes

9.1 Additional information

> The Korean government has laid a groundwork for fostering the community-based Wise Use concept, and has set up the local stakeholder governance mechanism, as it implements the Wetland City Accreditation. As it undertook the pilot project for testing the implementation of the Accreditation scheme, 5 pilot cities have in place a local wetland management committee that engage in activities and programmes on wetland conservation and restoration at community levels and policy-making process. For other municipalities that did not participate in the pilot projects, capacity-building programmes were offered to locals who engaged in the activities relating to conservation and wise use of wetlands, especially wetlands given legal protection. Some wetlands were designated as an Ecotourism Site (destination) to reinforce the Wise Use concept, through experience and on-site education opportunities to learn the conservation value of wetlands and their ecosystems. To promote the wise use and conservation of coastal wetlands, the Ministry of Oceans and Fisheries has run programmes for environmental education of and ecotourism at intertidal wetlands, Ramsar sites and MPAs, as a management effectiveness tool.

9.2 Have any amendments to existing legislation been made to reflect Ramsar commitments?
{1.3.5}{1.3.6}

A=Yes

9.2 Additional information

> Over the last 3 years, the Wetland Conservation Act was once revised to make sure that the penalties for non-compliance to restrictions and regulations within the boundaries of Wetland Protection Areas are effective. The revision was done on 27 January and came into force on 28 July 2016. The revision focuses on toughening up the penalties – the amount of the fine for non-compliance set out in Article 23 and Article 24 of the Act has increased from KRW 20 million to 30 million, and from KRW 10 M to 20 M, respectively.

9.3 Do your country's water governance and management systems treat wetlands as natural water infrastructure integral to water resource management at the scale of river basins? {1.7.1} {1.7.2} KRA 1.7.ii

D=Planned

9.3 Additional information

> In the past, the Water Quality and Aquatic Ecosystem Conservation Act enforced by the Ministry of Environment put priorities on the management of physical and chemical water characteristics of rivers. The Act was revised and re-named later as the Water Environment Conservation Act that prioritizes integrated water management measures focusing on conservation of aquatic ecosystems of rivers as well as water quality improvement. The revised Act includes provisions requiring the land acquisition programme in which the government purchases patches of land in wetlands or riversides of important values or implements environmental management plans. In addition, a 10-year Water Environment Management Plan is established for 4 largest river basin areas. Revisions and updates to the established plan are carried out 5 years after creation or when it deems necessary, reflecting on the progress made in a multi-stakeholder discussion among a Regional Environmental Office, local government and a Basin Management Committee of the given river basin area. A River-level Management Plan is required where the environmental criteria are not met or a River Management Committee advise to create the plan for better conservation and management of the river. The plan regulates a river and its adjacent areas, including its upstream waterbody, and revised and updated by a discussion among the local governments. The vision of integrated water management policies (IWMP) in Korea is "Water for Life – water for human and nature", highlighting five key principles in water management; Safety – healthy water circulation and climate change adaptation; Equity- sharing water value and equitable water distribution principle; Efficiency- optimizing the finance for integrated water management; Democracy- multi-stakeholder governance and cooperation; and Responsibility- cost allocation for water management to river basin governing bodies. The goals of IWMPs are to ensure healthy water circulation; to integrate harmonious control of water supply and demand; to secure IWM at river basin levels; to foster local people's engagement; establish IWM governance; and to set up a sustainable administrative and financial systems for IWMPs. The 20 strategic action plans for the river-level IWM at the Geum River include to establish a water use framework incorporating water circulation; to restore the river basin ecosystems; and to restore water environment at the coastal and estuarine areas. The IWMPs for the Nakdong River include 18 key strategic actions to rebuild sustainable water circulation and use; to improve biodiversity and aquatic ecosystems of the river; to re-green and restore the river to its natural state; and to establish and expand habitat conservation areas. For the Han River, 14 strategic action plans are in place to foster healthy waterside areas and cultural use of the river; to improve the water resource infrastructure aiming to implement IWMPs; and to conduct the integrated

monitoring of water quality and flow and aquatic ecosystems. For the Yeongsan River-Seomjin River, 39 strategic actions are in place to create an inclusive water management monitoring of water pollution and quality; and to set up, implement and assess a mid-term basin management policies, monitoring and research. The current movement to promote integrated water management policies only involves some stakeholders and the waterbody-basin management committees in place do not maintain political independence. To address these, transparency need to be secured through extended engagement of the private sectors and NGOs.

9.4 Have Communication, Education, Participation and Awareness (CEPA) expertise and tools been incorporated into catchment/river basin planning and management (see Resolution X.19)? {1.7.2}{1.7.3}

A=Yes

9.4 Additional information

> The Act on the Improvement of Water Quality and Support for Residents of Upstream Reservoir Areas requires establishment and operation of a basin-level management committee that design and implement various CEPA activities, including information exchange. Government officials from both central and local governments are required to join the committee as a member.

9.5 Has your country established policies or guidelines for enhancing the role of wetlands in mitigating or adapting to climate change? {1.7.3} {1.7.5} KRA 1.7.iii

A=Yes

9.5 Additional information

> The National Measures for Climate Change Adaptation 2015 was created and applied to wetland ecosystems in the inland, coastal and urban areas. The National Institute of Ecology (NIE) has studied the impacts of climate change on inland water systems, including wetlands and organized “Wetland and Climate Change”, a TED-like talk show as a public communication action to raise awareness. Small ponds and catchments that were constructed in the past for irrigation and agricultural use now re-emerge as solutions to increasing biodiversity, minimizing the impacts of drought and improving water quality. The frequency and severity of drought are expected to be intensified as they have been observed since 2013, and thus more ponds/catchments have been constructed in the drought-hit areas. In 2011, the Ministry of Environment conducted a policy research on management of rice paddy wetlands which set up a scientific foundation for national-level policies and strategies. The National Institute of Agricultural Sciences created a list of key indicator species in rice paddy ecosystems and assessed the cycle of material in rice paddies. NIE published in 2014 a series of the long-term ecological study it conducted, including “Freshwater ecosystems, climate change and environmental disturbance – how have rivers and wetlands changed?” and “Climate change, coastal species, inland animal species and their survival strategy – How do they adapt themselves to climate change?”.

The revised Conservation and Management of Marine Ecosystems Act presents a institutional framework to designated and manage coastal wetlands as an MPA, aiming to maintain and improve the wetland functions to store and absorb carbon.

9.6 Has your country formulated plans or projects to sustain and enhance the role of wetlands in supporting and maintaining viable farming systems? {1.7.4} {1.7.6} KRA 1.7.v

C=Partially

9.6 Additional information

> The irrigation systems in Korea depends on nearby rivers and streams. In recent years, the Korea government has had a cross-cutting discussion on how to improve the ecological functions of irrigation and a pilot project has been implemented. Thus, new programmes have been put in place to promote sustainable agriculture practices and safely manage soil and water. These programmes include direct provision of fund to farmers for eco-friendly agriculture practices; investigation to detect heavy metal pollution in agricultural farmlands; and projects to treat water from agricultural reservoirs. Additionally, the Ministry of Agriculture, Food and Rural Affairs participate in the National Wetland Deliberative Committee as a member to come up with measures to conserve rice paddy wetlands.

9.7 Has research to inform wetland policies and plans been undertaken in your country on:

{1.6.1} KRA 1.6.i

Please select only one per square.

a) agriculture-wetland interactions	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> D=Planned

b) climate change	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> D=Planned
c) valuation of ecosystem services	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> D=Planned

9.7 Additional information

> a) The National Institute of Agricultural Sciences conducted a monitoring research on rice paddies and their ecosystems, with the aim of identifying the benefit irrigation catchments provide for improving biodiversity. According to the monitoring results, the number of aquatic invertebrates is 5 times more in rice paddies with irrigation catchment than in rice paddies that have any of them. In addition, the Ministry of Environment has also carried out a research to review the conservation policies for rice paddies and reflect on the need to develop a set of national-level policies and strategies for rice paddy conservation.

b) In 2008, a research was conducted to examine how wetland functions (Upo Wetland) can contribute to mitigating climate change, especially lowering the rate of temperature changes. The Korea Environmental Institute has conducted a research to investigate the climate change impacts on ecosystems, especially wetland flora and vegetation. This research reviews the results of the climate change researches and studies done in Korea and gives recommendations on future actions, including climate change adaptation.

c) Researchers of Chungnam Institute, the National Institute of Ecology and the Saemangeum Regional Environmental Office have undertaken the assessment for rice paddy's ecosystem services; a research to set up a scientific foundation for ecosystem service assessment; and a study for valuing the ecosystem services intertidal mudflats provide. They particularly looked into the effectiveness of ecosystem services, the minimum land areas required to conserve ecosystem services, valuation and assessment, functions of ecosystem services, and management mechanisms.

9.8 Has your country submitted a request for Wetland City Accreditation of the Ramsar Convention, Resolution XII.10 ?

A=Yes

Target 10

The traditional knowledge innovations and practices of indigenous peoples and local communities relevant for the wise use of wetlands and their customary use of wetland resources, are documented, respected, subject to national legislation and relevant international obligations and fully integrated and reflected in the implementation of the Convention with a full and effective participation of indigenous and local communities at all relevant levels.

10.1 Have the guiding principles for taking into account the cultural values of wetlands including traditional knowledge for the effective management of sites (Resolution VIII.19) been used or applied? (Action 6.1.2/ 6.1.6)

D=Planned

10.1 Additional information

> It is widely recognized that wetlands have unique values as natural heritage and the ecological values wetland ecosystems and their wildlife species hold. Identifying traditional knowledge taking into account social, cultural and economic factors can contribute to increase awareness of wise use concept. Korea is in its early stage, however, to recognize such values wetlands have, and the Master Plan for Wetland Conservation includes the focus on discovering and keeping record of wetland-related traditional knowledge and sharing and disseminating the knowledge and information discovered.

"The National ecosystem assessment for the sustainable land management" published by the National Institute of Ecology suggests 6 categories of ecosystem education programmes, and out of 6 categories, Category F emphasizes the value of traditional ecological knowledge. The Ecosystem Service Assessment with participation of local communities assessed the ecosystem services provided by Seocheon Tidal Flat Ramsar Site, and in the assessment criteria, the Cultural Service assessed the traditional knowledge the locals have. The 3rd National Biodiversity Strategies and Action Plan includes actions to set up traditional knowledge database and list; to identify and study traditional knowledge about marine living resources; to develop a guideline to improve the connectivity of ecosystems in rural residential areas, including community forests and ponds/catchment for irrigation; and to identify and commercialize community-level biological resources. The Ministry of Oceans and Fisheries revised the Act on Marine Living Resources to lay a legal framework to conserve and manage traditional knowledge and will initiate a project to collect traditional knowledge relating to ocean and fishery ecosystems - the project covers WPAs in 2017 and will expand to all coastal wetlands by 2022.

10.2 Have case studies, participation in projects or successful experiences on cultural aspects of wetlands been compiled. Resolution VIII.19 and Resolution IX.21? (Action 6.1.6)

D=Planned

10.2 Additional information

If yes please indicate the case studies or projects documenting information and experiences concerning culture and wetlands

> The National Institute of Ecology carried out a project to support a framework for use of traditional knowledge in 2012. In carrying out the project, a forum of traditional knowledge experts was held to advise and improve the projects done by governmental agencies for conservation and use of traditional knowledge. In 2014, "Biodiversity Conservation and Utilization of biological resources in the context of implementing the Nagoya Protocol" published by Jeonbuk Development Institute suggested local-level measures and policies to promote wise use of traditional knowledge about biodiversity and biological resources.

10.3 Have the guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands been used or applied. (Resolution VII. 8) (Action 6.1.5)

A=Yes

10.3 Additional information

If the answer is "yes" please indicate the use or application of the guidelines

> Some local communities have engaged and participated in management and use of wetlands, through formal mechanisms, such as Wetland Conservation and Management Committee or local roundtable/consultation process at local levels, which are geographically based in WPA and/or Ramsar Sites. The operational guideline of such mechanisms, including the composition and regular meetings, were created to formalize the mechanisms. For candidate municipalities for nomination of Wetland City Accreditation, a management committee is in place for each candidate focusing on conservation and management activities of their wetlands.

10.4 Traditional knowledge and management practices relevant for the wise use of wetlands have been documented and their application encouraged (Action 6.1.2)

D=Planned

10.4 Additional information

> The planned activities include research activities to gather and identify traditional knowledge, to create a framework to promote utilization of traditional knowledge and to explore ways to enhance wise use of traditional knowledge.

Target 11

Wetland functions, services and benefits are widely demonstrated, documented and disseminated. {1.4.}

11.1 Has an assessment been made of the ecosystem benefits/services provided by Ramsar Sites and other wetlands? {1.4.1} KRA 1.4.ii

A=Yes

11.1 Additional information

If 'Yes' or 'Partially', please indicate, how many Ramsar Sites and their names

> Assessment of ecosystem functions and services that wetlands and forests provide was carried out at the national levels. Contingent Valuation Method was applied for assessing the ecosystem services Upo Wetland (Ramsar #934) provides, including water purification, flood control, reservoir for biodiversity and recreation & tourism. The assessment found that the site produce more than 19.49 billion Korean Won worth of ecosystem services annually, if it is conserved as it is today.

11.2 Have wetland programmes or projects that contribute to poverty alleviation objectives or food and water security plans been implemented? {1.4.2} KRA 1.4.i

C=Partially

11.2 Additional information

> The Resolution X.31 Enhancing Biodiversity in rice paddies as wetland systems adopted in 2008 at the 10th COP pointed out poverty alleviation rice paddies contribute to, as their important functions, especially in the East Asian region. Since 2006, Korea and Japan have co-hosted the exchange research programme on rice paddies and their species both in Korea and Japan. Through this exchange programme, researchers in both countries started having a closer look at the value of rice paddy wetlands, not only as food production, but also as healthy, resilient habitats for a variety of wild species.

11.3 Have socio-economic values of wetlands been included in the management planning for Ramsar Sites and other wetlands? {1.4.3}{1.4.4} KRA 1.4.iii

C=Partially

11.3 Additional information

If 'Yes' or 'Partially', please indicate, if known, how many Ramsar Sites and their names

> The Master Plan for Wetland Conservation requires the status of wetland research on WPA, establishment of a multi-stakeholder wetland management committee, education and communication programmes, programmes for improving local livelihoods and programmes for biodiversity conservation and management. For each WPA site, a conservation plan must be established with the aim to ensure the integrity of wetland ecosystems, improve the local livelihoods, through wetland benefits/services, such as ecotourism, provide education programme and create branding opportunities.

11.4 Have cultural values of wetlands been included in the management planning for Ramsar Sites and other wetlands? {1.4.3}{1.4.4} KRA 1.4.iii

A=Yes

11.4 Additional information

If 'Yes' or 'Partially', please indicate, if known, how many Ramsar Sites and their names

> As described in the 11. 3 above, a Wetland Conservation Plan for each WPA includes elements related to the local community and their cultures and society, including wetland-related cultural activities, such as a wetland festival and programmes featuring wetland-related cultures and the history relationship between wetlands and local culture.

The examples are Mulyeongari-oreum Ramsar Site(1648) which provided pasture for grazing cattle in the past. Locals near Ungok Wetland (1948) have engaged in management of the site, especially restoring the agriculture farmlands within the site boundaries to its natural state. Another example is found in communities dependent on tidal flats for thousands of years building traditional fishery knowledge and fishery community culture. In order to preserve such knowledge and culture, the Ministry of Oceans and Fisheries respects their experience and traditions and encourages and supports their participation in decision-making processes for marine WPA management plans and implementation.

Target 12

Restoration is in progress in degraded wetlands, with priority to wetlands that are relevant for biodiversity conservation, disaster risk reduction, livelihoods and/or climate change mitigation and adaptation. {1.8.}

12.1 Have priority sites for wetland restoration been identified? {1.8.1} KRA 1.8.i

A=Yes

12.1 Additional information

> Priority sites for restoration are identified and restoration are underway for improved wetland species habitats, disaster risk reduction and enhanced sustainable livelihoods. The 3rd MPWC for 2018-2022 includes priority restoration needs, especially for wetlands in the National Ecological Networks. Restoration projects were undertaken for the priority wetlands, including the High Moor Yongneup of Mt. Daeam (Ramsar # 898), Upo Wetland (934), Dongcheon Estuary (2269) and Hanbando Wetland Ramsar Site (2226).

The need to restore coastal wetlands back to their previous natural state has gradually increased - especially for the wetland reclaimed to agricultural farmlands or for freshwater treatment; and the coastal areas that once were used for salt production or aquaculture farming. In 2009, researchers found out (as commissioned by the Ministry of Oceans and Fisheries) that 70 sites with a total surface area of 32.12 □ were identified as the priority coastal wetlands for restoration, through field research, analysis, interview and survey.

In April 2018, 17 tidal flats were designated as an ecosystem restoration project based on field survey, demands from local governments, and reviews by research organizations.

12.2 Have wetland restoration/rehabilitation programmes, plans or projects been effectively implemented? {1.8.2} KRA 1.8.i

A=Yes

12.2 Additional information

If 'Yes' or 'Partially', please indicate, if available the extent of wetlands restored

> So far, 12 WPAs - 7 inland and 5 coastal wetlands - have undergone or are in restoration programme - Pelophylax chosonicus reintroducing programme at Du-ung Wetland Ramsar Site in 2006 and 2017-2018; preventing and reversing the desertification of Ungok Wetland for 2011-2013 and establishing plans to reintroduce endangered species in 2017; vegetation restoration in Hanbando Wetlands in 2015; waterway restoration for 2013-2015 in Sajapyeong WPA; moving the military base and facilities (12,373□) out of the High Moor, Youngneup of Mt. Daeam, and vegetation restoration at the area previously taken by the military base for 2017-2018; for Upo Wetlands, rice paddy improvement (192,250□) within WPA area in 2017; and reintroducing Nannophya pygmaea in Mujechineup Ramsar Site in 2017. The Guidelines for Intertidal Mudflat

Restoration announced in December 2016 provide a institutional basis for effective restoration of intertidal mudflats. The natural causeway that connects between Donggum-do Island and Ganghwa Island and is exposed at low tide and submerged at high tide has been restored to its natural state from 2014-2017, which was previously lost due to the bridge built between the two islands. Other restoration projects include restoration of closed seasalt and aquaculture farms into their original state in Suncheon Bay, tidal flat in Yubu Island, Seocheon, Gomsoman Tidal Flat in Gochang and Gopado Flat in Seosan; sediment improvement in tidal flats in Geunso Bay, Taeon; the natural causeway restoration in Simodo, Wongjin; and the waterway restoration for Jeungdo-Hwado Nodugil in Sin-an. Since 2015, assessment and research activities have been carried out to figure out how the wetlands maintain its ecological functions – wetlands were degraded and/or lost due to the Four Major Rivers Project and these wetlands were artificially restored as an alternative to the wetlands lost.

Target 13

Enhanced sustainability of key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture and fisheries when they affect wetlands, contributing to biodiversity conservation and human livelihoods

13.1 Have actions been taken to enhance sustainability of key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture and fisheries when they affect wetlands?

A=Yes

13.1. Additional information

If 'Yes', please indicate the actions taken

> The government issued an administrative order to ensure an integrated management of land planning and environmental conservation plans and this linkage between two sectors foster sustainability. The Environmental Impact Assessment has been used as a tool to assess any potential impacts a development plan or project can have on wetlands, prior to initiating the plan or project.

13.2 Are Strategic Environmental Assessment practices applied when reviewing policies, programmes and plans that may impact upon wetlands? {1.3.3} {1.3.4} KRA 1.3.ii

A=Yes

13.2 Additional information

> The Environmental Impact Assessment Act stipulates requirements that administrative plans at the national level must go through Strategic Environmental Assessment.

13.3 Are Environmental Impact Assessments made for any development projects (such as new buildings, new roads, extractive industry) from key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture and fisheries that may affect wetlands?

{1.3.4} {1.3.5} KRA 1.3.iii

A=Yes

13.3 Additional information

> The Environmental Impact Assessment Act includes 18 types of development project and requirements for scope and area of any given projects. For development projects that are not subject to EIA due to requirements over "area" – in case a project premise is smaller than EIA Act requires, but have any potential impacts on WPAs, they are subject to Small Scale Environmental Impact Assessment.

Goal 4. Enhancing implementation

Target 15

Ramsar Regional Initiatives with the active involvement and support of the Parties in each region are reinforced and developed into effective tools to assist in the full implementation of the Convention. {3.2.}

15.1 Have you (AA) been involved in the development and implementation of a Regional Initiative under the framework of the Convention? {3.2.1} KRA 3.2.i

A=Yes

15.1 Additional information

If 'Yes' or 'Planned', please indicate the regional initiative(s) and the collaborating countries of each initiative

> Korea hosted the Ramsar Regional Center - East Asia and the Secretariat of the East Asian-Australasian Flyway Partnership. The Ministry of Environment, the Suncheon City Government and the Ramsar Convention signed an MOU to host RRC-EA in Suncheon City in 2015 and the Center was inaugurated in 2016. The Center

works closely with 17 countries in the East Asian region, including China, Japan, Mongolia, Vietnam and Thailand. In 2009, Incheon City hosted the Secretariat of EAAFP in which government of 17 countries along the flyway, and 45 international organizations and agreement, including the Ramsar Convention, the Convention of Migratory Species, the Food and Agriculture Organization and the Conservation of Arctic Flora and Fauna, joined as partners (see more about EAAFP's partners at http://www.eaaflyway.net/about/the-partnership/national-partnership/south-korea/eaafp_rok/partners_rok/)

15.2 Has your country supported or participated in the development of other regional (i.e., covering more than one country) wetland training and research centres? {3.2.2}

B=No

15.2 Additional information

If 'Yes', please indicate the name(s) of the centre(s)

> Korea is not directly involved in development of such facilities but it has supported various programs financially. Also, as part of a research project on natural resources in North Korea, the MAB National Committee of the Republic of Korea is working with UNESCO on planning 'assessment project for biodiversity in coastal wetlands in Mt. Guweol Biosphere Reserve'.

Target 16

Wetlands conservation and wise use are mainstreamed through communication, capacity development, education, participation and awareness {4.1}

16.1 Has an action plan (or plans) for wetland CEPA been established? {4.1.1} KRA 4.1.i

Even if no CEPA plans have been developed, if broad CEPA objectives for CEPA actions have been established, please indicate this in the Additional information section below
Please select only one per square.

a) At the national level	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=In Progress <input type="checkbox"/> D=Planned
b) Sub national level	<input type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input checked="" type="checkbox"/> C=In Progress <input type="checkbox"/> D=Planned
c) Catchment/basin level	<input type="checkbox"/> A=Yes <input checked="" type="checkbox"/> B=No <input type="checkbox"/> C=In Progress <input type="checkbox"/> D=Planned
d) Local/site level	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=In Progress <input type="checkbox"/> D=Planned

16.1 Additional information

If 'Yes' or 'In progress' to one or more of the four questions above, for each please describe the mechanism, who is responsible and identify if it has involved CEPA NFPs

> a) At national level: The 5-year MPWC, established in accordance with the Wetland Conservation Act, includes the goals and plans to implement CEPA programme.

b) Sub-national level: The MPWC established at the sub-national level (namely metropolitan cities and provinces) is in line with the national-level MPWC and include its CEPA actions and programmes.

d) Local/site level: In each conservation and management plan, a separate CEPA program is included for the respective wetland and implemented accordingly.

16.2a How many centres (visitor centres, interpretation centres, education centres) have been established? {4.1.2} KRA 4.1.ii

a) at Ramsar Sites

E=Exact Number (centres)

> 11

16.2b How many centres (visitor centres, interpretation centres, education centres) have been established? {4.1.2} KRA 4.1.ii

b) at other wetlands

E=Exact Number (centres)

> 12

16.2 Additional information

If centres are part of national or international networks, please describe the networks

- > a) 3 installations in Upo Wetlands, 1 in Muan Tidal Flat, 1 in Seocheon Tidal Flat, 2 in Suncheon Bay (including Suncheon Bay International Wetland Center where RRC-EA is based), 2 in Jeungdo Tidal Flat, 1 in Dongbaekdongsan, 1 in Ungok Wetland, 1 in Gochang & Buan Tidal Flats, and 1 in Ungok Wetland
b) 1 visitor center each in Gangwha Tidal Flat, Geum River, Nakdong Estuary, Junam Reservoir, Bongam Tidal Flat, Hongseong, Taehwa River, Hwapocheon Wetland, Seosan, and Siheung

16.3 Does the Contracting Party {4.1.3} KRA 4.1.iii

Please select only one per square.

a) promote stakeholder participation in decision-making on wetland planning and management	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned
b) specifically involve local stakeholders in the selection of new Ramsar Sites and in Ramsar Site management?	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned

16.3 Additional information

If 'Yes' or 'Partially', please provide information about the ways in which stakeholders are involved

- > a) An MPWC is required to go through the review process by the National Wetland Deliberative Committee that consists of government officials, wetland experts and NGOs.
b) Multi-stakeholder engagement includes local governments, local people and environmental NGOs. New MPA designations are required to be reviewed by a public hearing consisting of local government, NGOs and local people of the proposed site. Recommendations for Ramsar designation are also done through public hearings.

16.4 Do you have an operational cross-sectoral National Ramsar/Wetlands Committee? {4.1.6} KRA 4.3.v

A=Yes

16.4 Additional information

If 'Yes', indicate a) its membership; b) number of meetings since COP12; and c) what responsibilities the Committee has

- > a) The membership includes officials from state-level wetland governmental agencies, wetland experts and NGOs. The committee consists of 1 Chairperson, 2 Vice-Chairpersons and 22 members.
b) Once since COP12: The meeting of the committee was held to select the final candidates for nomination of Wetland City Accreditation. In 2017, a plan was created to select new members and revive the committee. The MPWC includes requirements and guideline for reviving the committee.
c) The Wetland Conservation Act includes requirements to establish and operate the National Wetland Deliberative Committee. The responsibilities and mandates of the national-level committee include review of national wetland policy plans; application for new WPA designation; resolutions and recommendations adopted at the Ramsar COPs; and other matters related to wetland conservation policies and measures.

16.5 Do you have an operational cross-sectoral body equivalent to a National Ramsar/Wetlands Committee? {4.1.6} KRA 4.3.v

B=No

16.6 Are other communication mechanisms (apart from a national committee) in place to share Ramsar implementation guidelines and other information between the Administrative Authority and a), b) or c) below? {4.1.7} KRA 4.1.vi:

Please select only one per square.

a) Ramsar Site managers	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned
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b) other MEA national focal points	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned
c) other ministries, departments and agencies	<input checked="" type="checkbox"/> A=Yes <input type="checkbox"/> B=No <input type="checkbox"/> C=Partially <input type="checkbox"/> D=Planned

16.6 Additional information

If 'Yes' or 'Partially', please describe what mechanisms are in place

> a) The communication mechanisms are in place between the Ministry of Environment (inland) and the Ministry of Oceans and Fisheries (coastal). At the site levels, a conservation and management committee for each Ramsar Site is in place and consists of officials from MOF or MOE and their local offices.

b) Focal points of MEAS, including CBD, UNFCCC and IUCN communicate with the Focal Point of the Ramsar Convention, on a permanent basis.

c) The Korean government bears the responsibilities to conserve and manage wetlands of national importance or great ecological values. To meet these, the Ministry of Environment communicates with relevant governmental agencies to ensure conservation and management of Ramsar Sites and WPAs.

16.7 Have Ramsar-branded World Wetlands Day activities (whether on 2 February or at another time of year), either government and NGO-led or both, been carried out in the country since COP12? {4.1.8}

A=Yes

16.7 Additional information

> The Korean government (Ministry of Environment and Ministry of Oceans and Fisheries) designates a week of every May as National Wetland Week to celebrate the World Wetland Day through various in- and out-door activities, workshops and seminars. The state and local governments collaborate in designing and implementing programmes focusing on the "Conservation and Wise Use" mission and the hands-on experience approach for local people. The WWD Activities contribute to increasing the awareness of various stakeholders on the conservation and wise use concept and fostering information exchange. The Ramar AA and other wetland-related governmental organizations, local governments and NGOs collaborates in carrying out these activities. Not only that, these organizations voluntarily post newsletter and other publications about WWD, Wetland Week and the value of wetlands on their websites. In 2018, a wetland symposium, an exhibition for marine ecological education, and a wetland photo exhibition were held under the slogan "Wetlands for Sustainable Urban Future." In 2017, under the theme of "Wetlands for Disaster Risk Reduction", an international workshop was organized, providing a platform for discussion and information exchange regarding DDR examples. Also held were an wetland experts workshop and a special photography exhibition featuring carnivorous plant and moss species inhabiting wetlands in Korea. The 2016 Wetland Week's theme was "Wetlands, the key to Post 2020 Climate Change" and the activities featured exhibition, cultural performance, ecotourism, community clean-up campaign and bird watching. The 2015 theme was "Wetlands For Our Future, Biodiversity for Sustainable Development" and the activities included an international symposium and back-to-back seminar and a workshop on governance for wetland protected areas. On 4 May 2018, the Ministry of Oceans and Fisheries (including the Minister) hosted a WWD celebration in Julpo Bay Tidal Flay Eco-park in Buan, Jeonbuk, joined by 700 participants including the Jeonbuk Governor, a National Assembly member, Buan County Governor, NGOs, and residents. The event consisted of thematic performances, an academic symposium, and various booths for promotion and learning of tidal flats, among others.

16.8 Have campaigns, programmes, and projects (other than for World Wetlands Day-related activities) been carried out since COP12 to raise awareness of the importance of wetlands to people and wildlife and the ecosystem benefits/services provided by wetlands? {4.1.9}

A=Yes

16.8 Additional information

If these and other CEPA activities have been undertaken by other organizations, please indicate this

> Each Wetland Visitor Center located in major wetlands has their own experience-oriented programmes that offer education and learning experiences on wetland ecosystems. Local governments also have their own experience-oriented programme in place, such as ecotourism programme featuring wetland ecosystems, in collaboration with wetland experts and local stakeholders.

Target 17

Financial and other resources for effectively implementing the fourth Ramsar Strategic Plan 2016 – 2024 from all sources are made available. {4.2.}

17.1a Have Ramsar contributions been paid in full for 2015, 2016 and 2017? {4.2.1} KRA 4.2.i

A=Yes

17.2 Has any additional financial support been provided through voluntary contributions to non-core funded Convention activities? {4.2.2} KRA 4.2.i

A=Yes

17.2 Additional information

If 'Yes' please state the amounts, and for which activities

> In November 2014, the Korean Government provided fund (USD 20,000) for supporting participation of the developing countries in the Asian Wetland Symposium (AWS) and Asian Regional Preparatory Meeting for COP12 of the Ramsar Convention held in Cambodia.

17.3 [For Contracting Parties with a development assistance agency only ('donor countries')]: Has the agency provided funding to support wetland conservation and management in other countries? {3.3.1} KRA 3.3.i

A=Yes

17.3 Additional information

If 'Yes', please indicate the countries supported since COP12

> The Korea International Cooperation Agency (KOICA) was established by the Korean Ministry of Foreign Affairs and Trade as a governmental organization for Official Development Assistance (ODA) to enhance the effectiveness of the Korean grant aid programs for developing countries. Its ODA programmes include water management and agriculture and rural development, which indirectly contribute to wetland conservation. The Korean government, as the hosting country of RRC-EA provide funding for its operation and activities and indirectly supports Small Grant programme and capacity building programmes. The Green Climate Fund approved the wetland conservation project in the Amazon Basin in Peru, in November 2015, proposed by the Korean Government. The project owner, Peruvian Trust Fund for National Parks and Protected Areas (Profonanpe), will initiate the proposed activities starting from May 2018, focusing on improving the sustainable livelihood of the indigenous people who depend on the wetlands ecosystem services and benefits. The project aims to shift the production practices that cut down trees to get fruits into more sustainable ones, and to educate the sustainable production and selling of harvested fruits.

17.4 [For Contracting Parties with a development assistance agency only ('donor countries')]: Have environmental safeguards and assessments been included in development proposals proposed by the agency? {3.3.2} KRA 3.3.ii

A=Yes

17.4 Additional information

> The KOICA applies its Guideline for Environmental Mainstreaming to procedures relating to its organization, institutions, projects and projects. The Mainstreaming guideline includes recommendations on minimizing the environmental impacts and enhancing environmental conservation considerations in project planning and assessment. The guideline includes the Methodologies and Status of Environmental Mainstreaming and the KOICA's Mainstreaming Measures. The Methodologies section introduces the Strategic Environmental Assessment and the Environmental Impact Assessment as key tools for mainstreaming and presents the mainstreaming examples in other countries. The KOICA's mainstreaming section encompasses ways to carry out mainstreaming strategic planning, identifying and planning mainstreaming projects, project feasibility study, project selection, implementation and assessment, and examples and best practices. The guideline suggests the Environmental Checklist for a project that has any potential environmental impacts, and the list entails items regarding solid waste management; agricultural facilities/irrigation; infrastructure construction, including roads, railways, bridges, waterworks, and wastewater treatment and sewage systems; building construction; and forest plantation.

17.5 [For Contracting Parties that have received development assistance only ('recipient countries')]: Has funding support been received from development assistance agencies specifically for in-country wetland conservation and management? {3.3.3}

Z=Not Applicable

17.6 Has any financial support been provided by your country to the implementation of the Strategic Plan?

A=Yes

17.6 Additional information

If "Yes" please state the amounts, and for which activities

> As the host country of EAAFP and RRC-EA, Korea provides financial support for the two Regional Initiatives in

implementing its programmes. The financial support for RRC-EA assists its actions to implement the Strategic Framework of the Ramsar Convention in the East Asian Region, including RRC-EA Wetland Fund and CEPA & STRP NFPs Networking. The Small Grant programme of the center (a total of USD 55,000) will include support for the Wetland City Accreditation.

Target 18

International cooperation is strengthened at all levels {3.1}

18.1 Are the national focal points of other MEAs invited to participate in the National Ramsar/Wetland Committee? {3.1.1} {3.1.2} KRAs 3.1.i & 3.1.iv

C=Partially

18.1 Additional information

> The National Wetland Deliberative Committee is in place in accordance with the Wetland Conservation Act and participated by directors of divisions that are responsible for the Ministry's work with MEAs including Ramsar, CBD, and IPBES. In December 2017, the Director-General of the responsible bureau participated in a council meeting on finalization of the Wetland City Accreditation nomination list.

18.2 Are mechanisms in place at the national level for collaboration between the Ramsar Administrative Authority and the focal points of UN and other global and regional bodies and agencies (e.g. UNEP, UNDP, WHO, FAO, UNECE, ITTO)? {3.1.2} {3.1.3} KRA 3.1.iv

A=Yes

18.2 Additional information

> To foster and support more effective collaboration between focal points of MEAs, including the Ramsar Convention, the Korea's Permanent Mission to UN coordinates different governmental organizations and receive the secondment staff from them. The secondees participate in meetings of MEAs and works as a contact point ensuring better communications and collaboration between their organization and other MEAs.

18.3 Has your country received assistance from one or more UN and other global and regional bodies and agencies (e.g. UNEP, UNDP, WHO, FAO, UNECE, ITTO) or the Convention's IOPs in its implementation of the Convention? {4.4.1} KRA 4.4.ii.

The IOPs are: BirdLife International, the International Water Management Institute (IWMI), IUCN (International Union for Conservation of Nature), Wetlands International, WWF and Wildfowl & Wetland Trust (WWT).

C=Partially

18.3 Additional information

If 'Yes' please name the agency (es) or IOP (s) and the type of assistance received

> Established in 2014, WWF Korea has provided assistance to the Korean Government in its priority actions to conserve the Yellow Sea, i.e., expansion of MPA networks; and to ensure integrated watershed management practices in Pyeongchang in 2017 and Gimhae in 18.

18.4 Have networks, including twinning arrangements, been established, nationally or internationally, for knowledge sharing and training for wetlands that share common features? {3.4.1}

A=Yes

18.4 Additional information

If 'Yes' or 'Partially', please indicate the networks and wetlands involved

> Local governments that have one or more Ramsar Sites or EAAFP Flyway Sites signed a Site Twinning Agreement with their counterparts in countries in the flyway or in the region, including Japan, China and Singapore (Junam Reservoir-Kejo-numa wetland in Japan, Janghang wetland - Zhalong National Nature Reserve in China, Suncheon Bay - Arasaki wetland in Japan, Yubudo Tidal Flat - Sungei Buloh Wetland Reserve in Singapore). Collaborative programmes have been in place for coastal wetlands as well, with the Netherlands, Germany and Denmark (Wadden Sea) and NOAA of the United States.

18.5 Has information about your country's wetlands and/or Ramsar Sites and their status been made public (e.g., through publications or a website)? {3.4.2} KRA 3.4.iv

A=Yes

18.5 Additional information

> The National Wetland Center undertakes research and study on the status of wetlands designated as National Wetland, carries out public-awareness programmes designed to foster the Wise Use concept for all walks of life and implement policy-support projects to ensure effective implementation of the national wetland policies. Publications, literature and other contents regarding its works are all in its

website(www.wetland.go.kr), including the list of wetland stakeholders. The National Wetland GIS is available in its website(<http://gis.wetland.go.kr/wetland/index.jsp>), providing geographic information and status of wetlands in Korea. The Eco-sea website (www.ecosea.go.kr) provides information about coastal wetland, their status and location, including coastal wetland GIS (<http://webgis.ecosea.go.kr/>).

18.6 Has information about your country's wetlands and/or Ramsar Sites been transmitted to the Ramsar Secretariat for dissemination? {3.4.3} KRA 3.4.ii

A=Yes

18.6 Additional Information

> The Ramsar focal point in Korea updates the information about its Ramsar Sites through RSIS on a regular basis, and provides the status of its wetlands, national-level policies, measures, frameworks and institutions related to wetlands, the progress on the implementation of the Convention in Korea and the conservation status of national wetlands, through submitting a National Report every 3 year before COP.

18.7 Have all transboundary wetland systems been identified? {3.5.1} KRA 3.5.i

A=Yes

18.7 Additional information

> Years of restriction and control over civilian access have transformed the Korean Demilitarized Zone into pristine, intact ecosystems, including wetlands, that is home to a thriving population of many wildlife species and high biodiversity. The Korean government designated areas surrounding the Korean DMZ and the Civilian Control Line as one of 3 Key Ecological Networks in Korea, and conserves and manages the area. The Ministry of Environment has undertaken research on the wetlands located within the area and has made the result of the wetland research, including their location, name, status and types, available to the public, except the information on military credentials.

18.8 Is effective cooperative management in place for shared wetland systems (for example, in shared river basins and coastal zones)? {3.5.2} KRA 3.5.ii

A=Yes

18.8 Additional information

If 'Yes' or 'Partially', please indicate for which wetland systems such management is in place

> Korea has engaged in the Yellow Sea Large Marine Ecosystem Project, an international strategic project led by UNDP and GEF, with aims to minimize the environmental stress to the Yellow Sea, one of the 64 Large Marine Ecosystems (LMEs) in the world, and ensure more resilient, healthy coastal wetlands and their ecosystem in YS, especially tidal flats, one of the 4th largest intertidal flats in the world. The project focuses on conserving coastal wetlands, intertidal flats and marine resources and strengthening the supporting and regulating services the Yellow Sea provides.

18.9 Does your country participate in regional networks or initiatives for wetland-dependent migratory species? {3.5.3} KRA 3.5.iii

A=Yes

18.9 Additional information

> Korea is a partner of EAAFP. The Ministry of Environment and Incheon Metropolitan, the special partner, provides funds for hosting the secretariat and its operation.

Target 19

Capacity building for implementation of the Convention and the 4th Ramsar Strategic Plan 2016 – 2024 is enhanced.

19.1 Has an assessment of national and local training needs for the implementation of the Convention been made? {4.1.4} KRAs 4.1.iv & 4.1.viii

C=Partially

19.1 Additional information

> Korea has organized a series of capacity building workshops for government officials, local site managers and wetland experts, as a tool for contributing to the conservation and wise use of wetlands. Before organizing such workshops, the government carefully undertakes a survey into what kind of needs wetland site managers, especially government employees have and what they want to be educated. In 2017, a survey of Wetland Visitor Centers was conducted to examine their status, capacity and resources. On the World Wetland Day in 2018, the Ministry of Environment and the Suncheon City Government co-hosted the 2-day wetland site managers workshop which brought together government officials (both central and local), wetland experts and NGOs. Participants engaged in sessions of discussions, Q&A and presentation regarding a

linkage between wetland conservation and sustainable urban development, the Wetland City Accreditation, and the priority actions included in the 3rd Master Plan for Wetland Conservation.

19.2 Are wetland conservation and wise-use issues included in formal education programmes?

C=Partially

19.2 Additional information

If you answer yes to the above please provide information on which mechanisms and materials

> Korea runs various training and extracurricular activity programmes for schoolteachers and students, focusing on education, hand-on experience and research activities.

The Gyeongsangnamdo Provincial Office of Education provide schoolteachers with a training programme that help trainees better understand of biodiversity conservation, improve their capacity and expertise, and increase their awareness of biodiversity and particular species. The provincial education office also organizes a field-trip education programme (at Upo Wetland) for 3rd graders in elementary schools in the region. An extracurricular activity programme for middle and high school students focuses on group research activities in which participants learn and study the characters of Upo Wetland Ramsar Site and create publications of their study. Local wetland experts take part in each group and provide their knowledge and experiences and help guide their study.

The Jeju Provincial Office of Education designated a school near Dongbaekdongsan Ramsar Site, as a pilot project school and the school implemented a formal curricular programme for all graders that gives trainees opportunities to become a "youth natural/ecological interpretation provider".

In 2015, the Seoul City Government carried out an education programme for 30 pre-schoolers and elementary school students, focusing on field research activities and education on wetland ecosystems and their species in Gangseo Wetland and Nanji Wetland Centre.

19.3a How many opportunities for wetland site manager training have been provided since COP12?

{4.1.5} KRA 4.1.iv

a) at Ramsar Sites

E=Exact number (opportunities)

> 1

19.3b How many opportunities for wetland site manager training have been provided since COP12?

{4.1.5} KRA 4.1.iv

b) at other wetlands

E=Exact number (Opportunities)

> 1

19.3 Additional information

including whether the Ramsar Wise Use Handbooks were used in the training

> The Korean Government has run training programmes that help wetland management staff in both central and local government build their capacity in wetland conservation. The trainees are offered learning opportunities regarding the national policies and strategies and wetland- and wise use-related projects and programmes. For the central government, the training programme is an opportunity to educate and disseminate the national policies effectively.

For site managers for tidal flat, a training workshop is provided highlighting promotion, education, exhibition programme that can be featured at trainees' visitor center. Since 2017, the workshop has been held more than 2 times a year, and has invited experts from the Common Waddens Sea Secretariat to discuss measures to invigorate ecotourism programme. Since 2008, the MPA Management Competition has been organized to award best MPA management practices and their site managers, and share good management examples. A network of local MPA visitor centers has been in place to educate coastal wetland programmes and share the stories of their visitor center operation practices.

In collaboration with the National Oceanic and Atmospheric Administration of the United States, the capacity building programme on conservation and management of marine environment is offered annually to site managers, NGOs and wetland visitor centers' employees.

19.4 Have you (AA) used your previous Ramsar National Reports in monitoring implementation of the Convention? {4.3.1} KRA 4.3.ii

D=Planned

19.4 Additional information

If 'Yes', please indicate how the Reports have been used for monitoring

> The plan is to make use of the National Report in monitoring of implementation of the Convention and in preparing key indicators of the Convention implementation.

Section 4. Optional annex to allow any Contracting Party that has developed national targets to provide information on those

Goal 1

Target 1: Wetland benefits

Wetland benefits are featured in national / local policy strategies and plans relating to key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture, fisheries at the national and local level. Contributes to Aichi Target 2

Target 1: Wetland benefits - Priority

B=Medium

Target 1: Wetland benefits - Resourcing

B=Adequate

Target 1: Wetland benefits - National Targets

> Reflect wetland benefits in the National Biodiversity Strategies, the National Wetland Conservation Plan, the National Climate Change Response Plan, and the Marine Ecosystem Conservation and Management Plan.

Target 1: Wetland benefits - Planned activity

> • Complete the Fourth National Biodiversity Strategies (2019-2023), the National Wetland Conservation Plan (2018-2023), the First National Climate Change Response Plan, and the Second Marine Ecosystem Conservation and Management Plan (2019-2028) by 2018.

- Apply them to national strategies and plans for agriculture, water resource, and other related sectors.

• Establish an ecosystem service assessment systemⁱ⁾ for conservation sites (including inland wetlands) by 2018.

i) Develop an assessment tool and guideline for wetland ecosystem service by 2017 and start testing it from 2018.

• Conduct marine ecosystem service assessment projects (2017-2021) to build an assessment system for marine ecosystem (including coastal wetlands).

Target 2: Water Use

Water use respects wetland ecosystem needs for them to fulfil their functions and provide services at the appropriate scale inter alia at the basin level or along a coastal zone. Contributes to Aichi Targets 7 and 8 and Sustainable Development Goal 6.3.1

Target 2: Water Use - Priority

A=High

Target 2: Water Use - Resourcing

A=Good

Target 2: Water Use - National Targets

> • Build conservation plans for water resources and hydro-ecology including long-term comprehensive plans for water resources and conservation plans for water quality and hydro-ecology that respect wetland ecosystem needs.

Target 2: Water Use - Planned activity

- > • Include considerations for the wetland ecosystem in the Fifth Long-term Comprehensive Plan for Water Resource (2021-2030, by the Ministry of Land, Infrastructure and Transport) by 2021.
- Include considerations for the wetland ecosystem in existing plans such as the Water Environment Management Plan (2016-2025, by the Ministry of Environment) and the Conservation Plans for Water Quality and Hydro-ecology of the Four Major Rivers (2016-2025, by the Ministry of Environment) when the plans are renewed (every five years).
- Consider required amount of water for wetlands when establishing conservation plans for wetlands.

Target 3: Public and private sectors

Public and private sectors have increased their efforts to apply guidelines and good practices for the wise use of water and wetlands. {1.10}. Contributes to Aichi Targets 3, 4, 7 and 8.

Target 3: Public and private sectors - Priority

C=Low

Target 3: Public and private sectors - Resourcing

B=Adequate

Target 3: Public and private sectors - National Targets

> • Identify and promote good models of the wise use of wetlands at government and private sectors to support and encourage them.

Target 3: Public and private sectors - Planned activity

> • Identify and designate exemplary Ramsar wetland cities that use wetlands wisely and request the Wetland City Accreditation for them to be registered by Sep. 2017.

• Designate five excellent wetland ecotourist areas by 2018 in order to encourage and promote the wise use of wetlands and make them examples of successful wetlands.

• Strengthen the partnershipⁱ⁾ between government, corporate and private organizations for conservation and the wise use of wetlands.

i) Includes the National Environment Policy Committee, the National Biodiversity Committee, Korea Protected Area Forum, and the local and central management committees in protected maritime areas.

Target 4: Invasive alien species

Invasive alien species and pathways of introduction and expansion are identified and prioritized, priority invasive alien species are controlled or eradicated, and management responses are prepared and implemented to prevent their introduction and establishment. Contributes to Aichi Target 9.

Target 4: Invasive alien species - Priority

A=High

Target 4: Invasive alien species - Resourcing

A=Good

Target 4: Invasive alien species - National Targets

> • Establish and implement the Invasive Species Management Plan(i) for more effective control and management of invasive alien species. (inland)

i) A national plan which is renewed every five years based on laws on biodiversity conservation and use.

Includes damage status caused by invasive species and how to eliminate and prevent them.

• Establish and implement elimination and control plans on invasive species harmful to the marine ecosystem including coastal wetlands.

Target 4: Invasive alien species - Planned activity

> • Establish the Second Invasive Species Management Plan (2019-2023) by 2018 and continue to implement(i) risk assessment, control and eliminate population of invasive species, and develop relevant technology. (inland)

i) Implement risk assessment on the ecosystem facing intrusion of alien species, conduct surveys on and document their pathways of introduction, designate and announce harmful alien species, and develop and use methods to eliminate and prevent them.

• Build and implement strategies(ii) to eliminate invasive species high harmful to the ecosystem. (inland)

ii) Medium-and long-term strategies to eliminate fishes that disturb the ecosystem, implementation of the nutria elimination program.

• Strengthen ecological management(iii) for coastal wetlands by designating and eliminating additional harmful invasive marine species for enhanced management of invasive species that disturb the ecosystem.

iii) Designate and control 15 harmful marine species; remove and nationally monitor 'spartina anglica' that spreads fast and degrades costal wetland ecosystem.

Goal 2

Target 5: Ecological character of Ramsar Sites

The ecological character of Ramsar Sites is maintained or restored through effective, planning and integrated management {2.1.}. Contributes to Aichi Target 6,11, 12.

Target 5: Ecological character of Ramsar Sites - Priority

B=Medium

Target 5: Ecological character of Ramsar Sites - Resourcing

B=Adequate

Target 5: Ecological character of Ramsar Sites - National Targets

> • Establish and implement effective conservation and management plans to maintain or restore Ramsar wetlands' ecological functions.

Target 5: Ecological character of Ramsar Sites - Planned activity

- > • Establish Conservation Plan for Ramsar Wetlands (22 sites) by 2024 (Plan for 12 sites has been completed) for examining and monitoring of the ecosystem as well as restoration of degraded wetlands.
 - i) This includes monitoring and detailed examination of ecological changes of Ramsar wetlands, restoration projects of degraded wetlands, improving the hydrologic system to maintain ecological functions of wetlands, surveillance on illegal degradation and poaching activities on regular basis, preventing disposal of pollutants and collecting trash.
 - Conduct the Second Management Effective Evaluation (MEE)ii) on Korea's Protected Areas (22 sites) by 2024 (the First to be completed by 2016).
 - ii) Provides evaluation on overall management status on Ramsar wetlands and other protected sites in Korea including management quality and condition, number of managers and budget, and health regulations implementation, through field observation, interview with stakeholders, and documentation reviews, conducted by a group consisting of government organizations, relevant authorities (local governments, the national government, Korea National Park Service), Korean and international experts (professors, wetland experts, etc), and civilian experts, and suggests areas for improvement and recommendations.
 - Renew and update five sites on the Information Sheet on Ramsar Wetlands (RIS) by 2018. (13 sites to be completed by Dec. 2016, while four by 2022)
 - Surveyiii) population of migratory water birds coming to Ramsar wetlands each year.
 - iii) Includes monitoring and thorough examination of the Ramsar ecosystem and comprehensive examination of marine ecosystem for monitoring of seabirds inhabiting in coastal wetlands.

Target 7: Sites at risk

Sites that are at risk of change of ecological character have threats addressed {2.6.}. Contributes to Aichi Targets 5, 7, 11, 12.

Target 7: Sites at risk - Priority

B=Medium

Target 7: Sites at risk - Resourcing

B=Adequate

Target 7: Sites at risk - National Targets

- > • Monitor and examine wetland ecosystem in order to prevent and remove threats that can change Ramsar wetlands' ecological characters.
- Restore threatened or degraded Ramsar wetlands every year.

Target 7: Sites at risk - Planned activity

- > • Monitor and examine each year whether ecological characters of wetlands changed or degraded. (such as a comprehensive examination of national marine ecosystem and ecological surveys on each Ramsar wetland)
- Restore (or remove threats in) Ramsar wetlands each year if their ecosystem is or can be degraded.
- ※ No wetlands are registered in the Montreux Record.

Goal 3

Target 8: National wetland inventories

National wetland inventories have been either initiated, completed or updated and disseminated and used for promoting the conservation and effective management of all wetlands {1.1.1} KRA 1.1.i. Contributes to Aichi Targets 12, 14, 18, 19.

Target 8: National wetland inventories - Priority

B=Medium

Target 8: National wetland inventories - Resourcing

B=Adequate

Target 8: National wetland inventories - National Targets

> • Establish and regularly update national wetland inventory) to publish current status and information of wetlands in Korea.

i) Database that includes list of all wetlands discovered in Korea, and their names, location, size (boundaries and coverage), area and scale, and ecological characters. (Wetland examination and data collection started in 2006 and an upgrade process of the database will be complete by 2018.)

Target 8: National wetland inventories - Planned activity

> • Monitor all wetlands in Korea in a five-year routine and release the result.

• Complete a national wetland inventory by 2018.

• Share the inventory (current status and information of wetlands) on the National Wetlands Center website for easy access and promote its usage.

• Examine one fifth of all wetlands in Korea that are registered in the inventory (survey on all wetlands to be complete in five years) and update changes in wetland status and related information (2018-2024).

• Conduct a comprehensive examination annually and release and regularly update a database on mud flats (coastal wetlands) ecological status.

Target 9: Wise Use

The wise use of wetlands is strengthened through integrated resource management at the appropriate scale, inter alia, within a river basin or along a coastal zone {1.3.}. Contributes to Aichi Targets 4, 6, 7.

Target 9: Wise Use - Priority

C=Low

Target 9: Wise Use - Resourcing

C=Limiting

Target 9: Wise Use - National Targets

> • Implement efficient policy i) on how to use wetland resources wisely.

i) On how to use wetland water for drinking, agriculture, and power generation; how to use bio-species, gene resources, and natural resources for medical purposes, and how to produce food from wetland resources including fruits and vegetation.

Target 9: Wise Use - Planned activity

> • Build national plans by 2017 for wetland conservation including the wise use of wetlands. (inland and coastal)

• Establish by 2019 the Marine Ecosystem Conservation and Management Plan (2019-2028) including a wise use of wetland resources.

• Establish measures ii) to use wetlands wisely through efficient management of wetland resources.

ii) Designate stream and estuarine wetlands for conservation and management of water resources; use wetland water for drinking, agriculture, and power generation; produce food from resources in the wetlands; and supply medical materials from gene resources and natural resources.

• Prepare measures iii) to promote the wise use of wetlands and learning programs for the public, and support ecotourism and education on ecosystem.

iii) Includes installing facilities for ecotourism and public participation and developing and operating education and experience programs for local residents and students.

Target 10: Traditional Knowledge

The traditional knowledge innovations and practices of indigenous peoples and local communities relevant for the wise use of wetlands and their customary use of wetland resources, are documented, respected, subject to national legislation and relevant international obligations and fully integrated and reflected in the implementation of the Convention with a full and effective participation of indigenous and local communities at all relevant levels. Contributes to Aichi Target 18.

Target 10: Traditional Knowledge - Priority

B=Medium

Target 10: Traditional Knowledge - Resourcing

B=Adequate

Target 10: Traditional Knowledge - National Targets

> • Protect and document indigenous/local people's traditional knowledge and practices of using wetland resources and encourage them to use the resources wisely.

Target 10: Traditional Knowledge - Planned activity

> • Research and record information related i) to humanistic, social, and historical status of wetlands when building the 2018 national wetland inventory and establishing the Marine Ecosystem Conservation and Management Plan (2020-2029).

i) How the wetland was created, related traditional knowledge, and local economy (fishing and farming methods).

- Include research, recording, and documentation of humanistic, social, and historical status of wetlands when establishing the Third National Wetland Conservation Plan (2018-2022) in 2017.

- Include a medium-and long-term research plan for traditional knowledge of wetlands and conservation of biological resources in the Fourth National Biodiversity Strategies (2019-2023) that is to be established in 2018.

- Build plans ii) to oblige and activate forming and operating local resident council and private/public wetland conservation management committees in areas where there are wetlands by 2017 and continue with the guideline iii).

ii) The Third National Wetland Conservation Plan (2018-2022) to be complete by 2017

iii) The National Guideline for Conservation Sites (Dec. 2015-present)

Target 11: Wetland functions

Wetland functions, services and benefits are widely demonstrated, documented and disseminated. {1.4}.
Contributes to Aichi Targets 1, 2, 13, 14.

Target 11: Wetland functions - Priority

A=High

Target 11: Wetland functions - Resourcing

A=Good

Target 11: Wetland functions - National Targets

> • Build and implement plans to systematically promote, document, and distribute functions, ecological service, and benefits of wetlands.

Target 11: Wetland functions - Planned activity

> • Include detailed plans to promote, document, and distribute functions and benefits of wetlands in the Third National Wetland Conservation Plan (2018-2022) and implement the plans every year.

- Publish and distribute brochures and videos on wetlands and detailed research outcome of wetland ecosystem.

- Hold photography contest on wetland ecosystem, reward those who greatly contribute to wetland conservation, hold an event marking the World Wetland Day, promote public awareness on wetland, and operate field trip, learning, and education programs on wetlands.

• Thoroughly examine the ecosystem to evaluate functions of Ramsar wetlands every five years and distribute the outcome.

• Develop methods and guidelines to assess economic value of ecosystem service of wetlands including the Ramsar sites by 2017, and start test assessment from 2018.

• Conduct marine ecosystem service assessment projects (2017-2021) to build an assessment system for marine ecosystem (including coastal wetlands).

Target 12: Restoration

Restoration is in progress in degraded wetlands, with priority to wetlands that are relevant for biodiversity conservation, disaster risk reduction, livelihoods and/or climate change mitigation and adaptation. {1.8.}.
Contributes to Aichi Targets 14 and 15.

Target 12: Restoration - Priority

A=High

Target 12: Restoration - Resourcing

A=Good

Target 12: Restoration - National Targets

> • Examine for degradation of wetlands with great benefits for biodiversity and local economy, and plan and implement restoration process.

Target 12: Restoration - Planned activity

> • Check for degradation every year in important wetlands including protected areas, Ramsar wetlands, and ecotourist wetlands, and choose which degraded wetland to restore through thorough examination on a five-year basis.

• Include restoration plans for protected areas, Ramsar wetlands, and ecotourist wetlands in the Third National Wetland Conservation Plan (2018-2022) and implement the plans every year.

i) Initiate restoration projects on four coastal wetlands (mud flats) including Ungok Wetland.

Target 13: Enhanced sustainability

Enhanced sustainability of key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture and fisheries when they affect wetlands, contributing to biodiversity conservation and human livelihoods. Contributes to Aichi Targets 6 and 7.

Target 13: Enhanced sustainability - Priority

C=Low

Target 13: Enhanced sustainability - Resourcing

C=Limiting

Target 13: Enhanced sustainability - National Targets

> • Prepare and continuously implement policies that can contribute to biodiversity conservation and local economy by maintaining sustainability of fishing and farming activities that could affect wetland ecosystem.

Target 13: Enhanced sustainability - Planned activity

- > • Prohibit fishing in wetlands during every winter season when migratory birds emerge and compensate local residents with for resulting economic loss annually.
- Implement annual projects to purchase agricultural lands in order to eliminate negative effects on wetland ecosystem and bio-species caused by farming activities.
- Continue to prohibit any development except military activities, natural disaster prevention measures, and local people's agricultural activities that affects wetlands. Development plans may be permitted if they are inevitable. (Wetland Conservation Law)
- Continue to conduct a strategic environment impact evaluation when a development project of a certain scale that can affect wetlands and conduct environment impact evaluations at different levels. (Environment Impact Evaluation Law)
- Review drafts of plans on usage and development of public waters that is influential to ecosystem of coastal ecosystem before the plans are established, in order to prevent reclamation and degradation of coastal wetlands. (Public Waters Law)

Goal 4

Target 15: Regional Initiatives

Ramsar Regional Initiatives with the active involvement and support of the Parties in each region are reinforced and developed into effective tools to assist in the full implementation of the Convention. {3.2.}

Target 15: Regional Initiatives - Priority

B=Medium

Target 15: Regional Initiatives - Resourcing

B=Adequate

Target 15: Regional Initiatives - National Targets

> • Support conservation and the wise use of wetlands in East Asia and South-east Asia with strengthened partnership with Ramsar initiatives.

Target 15: Regional Initiatives - Planned activity

> • Continue to support and participate projects led by regional initiatives such as RRC-EAi) and the East Asian-Australasian Flyway Partnership (EAAFP) and provide consultation.

i) Ramsar Regional Center East Asia, established in July 2009 through the MOU between the Korean government (central and local) and the Ramsar Convention Secretariat, to educate government officials and local residents in East Asia and South-east Asia, to strengthen network, and to support wetland conservation projects.

Target 16: Wetlands conservation and wise use

Wetlands conservation and wise use are mainstreamed through communication, capacity development, education, participation and awareness {4.1}. Contributes to Aichi Target 1 and 18.

Target 16: Wetlands conservation and wise use - Priority

A=High

Target 16: Wetlands conservation and wise use - Resourcing

C=Limiting

Target 16: Wetlands conservation and wise use - National Targets

> • Continue with the CEPA (Communication, Capacity Building, Education, Participation, and Awareness) program, based on the policy to conserve and use wetlands included in the National Wetland Conservation Plan.

Target 16: Wetlands conservation and wise use - Planned activity

> • Continue with the CEPA program) with stakeholders such as government and private organizations, experts, and local residents annually and institutionalize it.

i) Includes workshops and events marking the World Wetland Day; capacity building workshops for local residents, private experts, and public officials related to wetlands; capacity building programs for local residents led by private environment groups; education, learning, and field trip programs for students; and capacity building programs for coastal wetland area managers of the Marine Protection Area Center.

• Continue to operate the National Wetlands Center and wetland visitor centers for support and promote conservation and the wise use of wetlands.

• Institutionalize the CEPA program by designating and using focal points in the government and private organizations.

Target 17: Financial and other resources

Financial and other resources for effectively implementing the fourth Ramsar Strategic Plan 2016 - 2024 from all sources are made available. {4.2.}. Contributes to Aichi Target 20.

Target 17: Financial and other resources - Priority

B=Medium

Target 17: Financial and other resources - Resourcing

B=Adequate

Target 17: Financial and other resources - National Targets

> • Secure finance to implement the Ramsar Strategic Plan and continue to include that in the national budget.

Target 17: Financial and other resources - Planned activity

- > • Secure and allocate national budget every year to implement the Ramsar Convention.
- Continue to financially support RRC-EA with its operation and projects.
- Seek for measures to support non-core activities of the Convention as much as possible within national budget availability

Target 18: International cooperation

International cooperation is strengthened at all levels {3.1}

Target 18: International cooperation - Priority

A=High

Target 18: International cooperation - Resourcing

D=Severely limiting

Target 18: International cooperation - National Targets

> • Enhance cooperation between government and non-government organizations for implementation of international conventions including the Ramsar Convention.
(Korea has two national initiatives; RRC-EA and EAAFP.

Target 18: International cooperation - Planned activity

- > • The Korean delegation to participate in the 53rd Standing Committee Meeting in 2017 and the 13th Conference of the Parties in 2018.
- Enhance partnership) among countries and international organizations for effective conservation and management of the Yellow Sea Eco-region.
- i) Host workshops for strengthening multilateral network (IUCN, the Ramsar Secretariat, BirdLife International, the EAAFP, and others) and education for policy implementation of management of migratory birds and their breeding sites in the Yellow Sea area.
- Provide supports to action plans based on bilateral agreements on protection of migratory birds (including Korea-Russian, Korean-Australia, and Korea-China).
- Strengthen cooperation among non-government organizations by holding workshops for wetland experts bilaterally (Korea-US, Korea-China, Korea-Russia, and Korea-Japan) for implementation of the Ramsar Convention and sharing information on wetlands.
- Introduce advanced wetland management methods by initiating a project that follows the MOU with the Common Wadden Sea Secretariat.

Target 19: Capacity Building

Capacity building for implementation of the Convention and the 4th Ramsar Strategic Plan 2016 – 2024 is enhanced. Contributes to Aichi Targets 1 and 17.

Target 19: Capacity Building - Priority

A=High

Target 19: Capacity Building - Resourcing

B=Adequate

Target 19: Capacity Building - National Targets

> • Continue to educate and train stakeholdersi) for implementation of the Ramsar Convention, wetland conservation and management, and better awareness.

i) Includes central and local government officers responsible for wetland conservation and management, environment groups, experts, and local residents.

Target 19: Capacity Building - Planned activity

> • Implement education programsii) every year for central and local government officers responsible for wetland conservation and management, local residents, and students, for their understanding and awareness of wetland conservation and management.

ii) Such as symposiums and forums on the Ramsar Convention and strategic plans and how to implement them in Korea; workshops inviting related organizations, experts, and local residents; contests on protected marine areas; and holding workshops for the local visitors' center network.

• Attend Ramsar Standing Committee meetings and regional meetings; and participate and support Ramsar regional initiativeiii) education, training, and cooperation programs.

iii) Includes RRC-EA and EAAFP.

• Develop technologyiv) to conserve, manage, and restore wetlands for implementation of the Ramsar Convention strategic plans by 2024.

iv) For wetland ecosystem service assessment, wetland restoration and construction, and elimination of invasive species.

