

Research · Exhibition · Education · Restoration





# National **Institute of** Ecology



www.nie.re.kr



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·History ·Core Functions Organization Management Strategy ·NIE CI·Character

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### Introduction The National Institute of Ecology (NIE) was established to enhance national competitiveness by leading ecological research in Korea and the world, and to help conserve the environment and foster the right environmental awareness by providing people with diverse experiences and learning fields about the ecosystem.

In the exhibition areas, you can experience a wide range of ecosystems including the Korean Peninsula ecosystem, tropical, desert, Mediterranean, temperate, and polar regions. The outdoor ecological space is equipped with Ecorium, an indoor exhibition space, and various eco-experience education programs.

### Institution Construction Period 2007-2012 Land Area 998,655m<sup>2</sup> (Building Floor Area 60,321m<sup>2</sup>) Core Facilities Main Building, Ecorium, Restoration Center, Education Center, Visitor Accommodations, etc

### History • 2007.6. · 2013.10 • 2014.1. 2019. 5. Signing of [MOU between the Registration of NIE incorporation Designation of public institutions. Acauisition of government and Seocheon-gun] Wetlands Center (Assigned guasi-government agencies) E ß मि 俞 **K** Enactment of [Act on the Establishment Opening of the Center for Endangered Opening of NIE and Operation of NIE Species Restoration (Enforced on '13. 9. 13.) 2013.6. \* 2013.12. 2018.10.

## Core Functions



## **Ecological Research**

- · Ecological Research and Monitoring
- · Policy support for the natural environment field
- · Research on Ecosystem Services and Safety Management of Invasive Alien Species



## **Ecology Exhibitions**

- Animal and Plant Ecological Exhibition
- Development/Operation of ecological exhibition contents



## **Ecology Education**

- · Development/Operation of Ecological Education Program
- · Development and distribution of ecological knowledge contents



## **Regional & International Cooperation**

- · Exchange and cooperation among ecological research institutes
- · Establishing an ecosystem information network
- Development of eco-tourism resources
- Regional cooperation



## **Recovery of Endangered Species**

- Establishment / operation of an endangered wildlife protection facility
- · Conservation / proliferation / recovery of endangered wildlife

Organization

### Office of Audit Division of Social Responsibility & Strategic Management Dept. of Secretary Dept. of Performance Dept. of Dept. of Community Management PR & Communications Cooperation Conservation & Assessment Research Bureau Center for Endangered Species Restoration Survey & Safety Research Bureau Exhibition & Education Bureau Division of Safety & Facility Division of Division of Division of Division of Ecological Survey Division of Botanic Research&Management Wetlands Center Administrative Planning Administrative Support Ecological Assessment Climate change Ecology Ecological Ecological Threat Management Exhibition & Education Zoological Research&Management Operational Support Restoration lesearch Planning S Dept of Planning S Coordination Dept of Budget S Finance Dept of Research Policy Dept.of Human Resources National Ecosystem SurveyTeam Dept. of Landscape & Native Plants Dept.of Administrative Support Dept.of Exhibition Planning Environmental Impact Teamof Invasive Dept.of Safety EcoBank Team General Service Team Dept.of Animal Welfare Conservation Planning Team Mammals Team ClimateChange Alien Species Assessment Team Research Research Team - 1 . 1 Dept.of Greenhouse Plants Dept.of Education& Public Relations TeamofLong-Term Ecological Research Dept. of Zoological Management Dept.of Teamof Dept.of Facility Biomimicry Team Research Team LMOResearch Team Wetlands Research Team Dept.of Exhibition Conservation Birds Team General Affairs & Labor on Ecological and Natural Map Assessment Ecosystem Service Fishes, Amphibians & Reptiles Team Insects & Invertebrates Team Dept.of Ecological Education Dept.of Information Ecological Space Research Team Evolutionary Ecology Research Team Teamof Team of Cooperation on Dept.of Facility TeamofVulnerable Ecological Research Habitat Research Team Protected Area Management Research Wetlands Management Dept. of International Cooperation Dept.of Publishing Plants Team



Wetlands Center Location 38, Isan-gil, Ibang-myeon, Changnyeong-gun, Gyeongnam Total area 10,207m<sup>2</sup> Building Floor Area 4,972m<sup>2</sup>

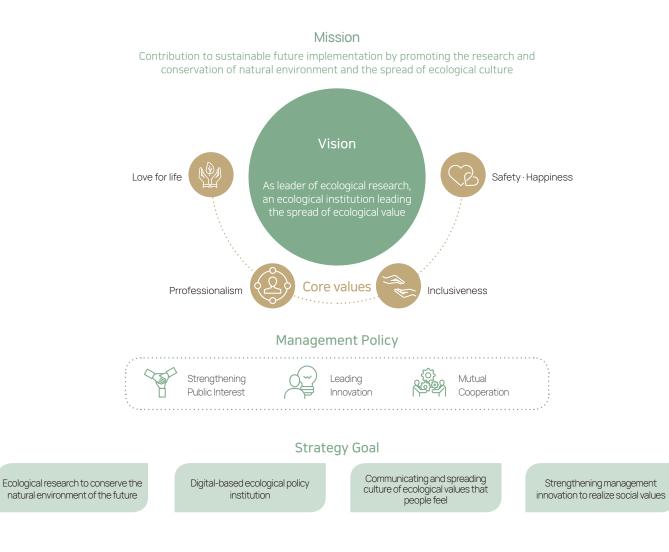
It was built in Changnyeong-gun, Gyeongnam to serve as a national control tower for the conservation of wetlands in Korea after the 10th Ramsar Conference in 2008, and was transferred to the NIE in May 2019.



Center for Endangered Species Restoration Location 23, Gowon-gil, Yeongyang-eup, Yeongyang-gun, Gyeongbuk Total area 2,554,337m<sup>2</sup> Building Floor Area 16,029m<sup>2</sup>

It was built in Yeongyang-gun, Gyeongbuk in 2018 to streamline the work of conserving endangered species on the Korean Peninsula for the recovery of endangered species, basic/application research, and habitat conservation/rehabilitation assessment.

## Management Strategy



## NIE CI

## Character



The rising leaves represent a new paradigm for a harmonious and sustainable ecosystem and symbolize the vision of the NIE, which serves as a hub for research/exhibition/education.

The colorful mix of leaves means the co-prosperity of various biota, the communication of nature and human beings, and the enjoyment of the various experiences provided by NIE.



Hadaram (Siberian flying squirrel)

The popular HaDaRam is a great place to watch, even at night, to protect and help your ecological friends



Gwiyomi, who listens to distant sounds. acts as a leader of

ecological friends with its agile

movement.

Seumi (Sika deer)

With a pure and clear mind, Seumi

tells her ecological friends a story

of a blue sky full of hope and helps

them have dreams

Prairie (Prairie dog)

The curious Prairie is careful in everything, and claims to be the watchman of ecological friends



Paengi (Gentoo penguin)

Pengi, who takes manners importantly, is a righteous friend who can't stand injustice as a gentleman caring about his friends



Gangdari (Common otter)

is a party starter and serves his friends by going back and forth between water and land



Geumguri (Korean golden frog) Jeoni (Black-faced spoonbill)

The free-spirited, jolly Geumguri Jeoni with a blunt, quiet personality takes care of his ecological friends always gives new joy and fun to his ecological friends

with faith and consideration alongside his generous heart and deep affection



Outgoing and cheerful Gangdari



·Mandatory Research

·Basic Research

·Research on Recovery of Endangered Species

·Research on Conservation of Wetlands Ecosystem

## Mandatory Research

Supports the establishment of national policies for the maintenance of a healthy ecosystem through stable operation of mandatory research projects

## Basic Research

## National Survey of Nationwide Natural Environment

- · National Survey of Nationwide Natural Environment
- · Building GIS-DB
- · Establishing ecology/nature maps
- Preparation and management of the urban ecology status map
- Invasive Alien Species Management
- Surveillance on species disturbing ecosystem Detailed investigation of alien
- species Survey on the national habitat of alien species

## LMO Safety Management

- · LMO Risk evaluation (consultation) · LMO Risk Assessment Institution
- ·LMO Detection Development & Monitoring
- · LMO Environmental Safety Center

## Assigned project by Ministry of Environment

- ·Survey of ecosystems between DMZ and Baekdudaegan area
- · Survey on special habitat, such as Uninhabited Islands
- and Landscape Conservation Area
- Effects Report



To enhance biodiversity, it examines the status of the natural environment across the country, creates and updates ecological/ natural maps used for this protects our ecosystem from efficient management of the land, and provides natural environment proactive management system for information to the people.

In response to the disturbance of the ecosystem caused by the continuous inflow of alien species into Korea,

the alien species by establishing a

biodiversity conservation.



The research team comprehensively studies the effects of LMOs (Living Modified Organism), including the risk assessment (under discussion) and the operation of risk assessment institutions, development of detection methods, monitoring, and follow-up management of LMOs in Korean ecosystem.

It carries out post-management and policy support work through research on ecological impact assessment of development projects, along with the demilitarized zone (DMZ) and the Civilian Control Zone (CCZ), the key and buffer zone between Baekdudaegan area and the survey on the Uninhabited islands, the survey on Specific islands, and the survey on designation and status of the Ecosystem and Landscape Conservation Area.

· Detailed inspection of the Ecosystem ·Review of Post-environmental





Conducting ecological research for environmental conservation as a leading ecological research institute

## Research on the Basic Ecology

Research on National Long-term Ecological Research

- · Research on the ecological roles and functions of insectivorous bats
- · Research on the tropic relationships and energy flow of cave ecosystems
- · Research on the interaction between microbiome and insects

· Research on endophytic fungi that are resistant to environmental stress

### Research on the Conservation of Land

- · Detailed inspection of sections for frequent road-kill accidents
- · Evaluation of the risk of climate change in the ecosystem
- · Molecular ecological study of cedar trees in response to climate change

### Research on the Improvement of Ecological Valuation

- · Research on evaluation and conservation of ecosystem services
- · Research on ways to evaluate regional ecological value and to promote awareness
- · Evaluation of Ecosystem Values and Enhancement of Perception for Balanced National Land Environment Management



This serves as a reasonable coordinator for conservation and development (policies) of nature through the proper ecological value assessment.



public awareness about changes in the spread of biodiversity values ecosystems by setting up national and the establishment of national long-term ecological research centers environmental policies through ecological at major locations in Korea to predict structure, function, and bio-adaptation mid- to long-term environmental changes research. and suggest countermeasures.



This contributes to the promotion of This provides a scientific basis for



This investigates (evaluates) for the ways to respond to ecological threats caused by changes in climate change, habitat damage, ecosystem breaks, and road-kill, and prepares for the measures for national environmental adaptation and conservation.

## Basic Research

Conducting ecological research for environmental conservation as a leading ecological research institute

## Research on Recovery of Endangered Species

## Research on New Ecological Technology

EcoBank

· Biomimicry research

### Cooperative research-based projects

International cooperation for · Capacity building for international ecology issue and policy cooperation





Establishing an EcoBank system to Striving to develop high value-added collect, share and utilize domestic convergence technologies and revitalize and international ecological information; the local economy by conducting it provides a foundation for international ecological simulation research that joint research in the field of ecology. will drive industrial use of ecological

research.





## Research on Recovery Strategy

- Developing and implementing mid- to long-term research plans for endangered wildlife
- · Assessment of endangered wildlife recovery projects, national & international cooperation and management of database
- Research on conservation/restoration of endangered wildlife habitats





This supports systematic recovery of endangered wildlife by selecting the species to be restored and establishing a plan to restore them in accordance with the 'Endangered Wildlife Conservation Comprehensive Plan' announced by the Ministry of Environment.

## Proliferative Recovery Research

- · Securing original species through genetic verification and establishing a plan for growth/rehabilitation of species
- Securing the breeding population through the development of breeding and proliferation techniques
- · Management of breeding/wild population by managing genetic diversity





This strives to ensure biodiversity in the Korean Peninsula and provides a healthy ecosystem in which humans and creatures coexist through the proliferation and restoration of endangered wildlife.

## Research on Restoration of Wetlands Ecosystem

Wetlands Center: Changnyeong, Gyeongnam

## Conservation of wetlands and biodiversity in wetlands

 Investigation/research for efficient management of wetlands ecological resources
Preparation of wetlands inventory and establishment of national wetlands information database, including wetlands survey data
Support for wetlands policies such as the designation of wetlands

protection areas and the establishment of management plans





Wise use of wetlands

- · Establishing domestic and international networks and supporting policies of wetlands-related organizations and citizens
- · Establishing and certifying wise use guidelines
- · Capacity building of stakeholders



We aim to develop/distribute programs that allow various stakeholders involved in wetlands to re-recognize their value and that participate in conservation and management.



- · Exhibition
- Education
- · Publication
- · External Relations

## Exhibition

### Strives to conserve the environment and deliver ecological value through various exhibitions

## Exhibition

## **Special Exhibition**

The wonder of Ants (2015)





It's an ant science base where you can observe living ants with images of specialized laboratories in different fields. It's structured from discovering new ants to becoming a researcher in the process of scientific research. Biomimicry (2017)





Under the theme of 'Biomimicry' where various ideas from nature are used in human life, it has introduced various exhibition interface programs that allow visitors to participate in the construction of 'study space' and 'play space'.

It's an exhibition designed to look at climate change from a 'ecological' perspective and to think about the risks of climate change impact on animals and plants, countermeasures, and action plans to slow it down.

Ecosystem and Climate Change (2018)

Korean DMZ Ecosystem (2019)





This exhibition is designed to reexamine the ecological value of the DMZ (demilitarized zone) of the Korean Peninsula, and to attract interest and sympathy for the conservation of ecology in the DMZ. You can see the natural ecosystems of the DMZ that have overcome from the scars of the Korean War.

## Seasonal events

## A variety of seasonal events, contributing to the spread of ecological culture







NIE provides a place for the whole family to be together at spring where all things come to life.

Our Flower Story(2014) Our Food found in Nature(2015) Ecological Painting Competition(2017) Spring Photo Competition(2019) Summer





Another way to enjoy your summer vacation. There are summer events where you can feel exotic atmospheres from all over the world.

Summer in NIE(2014, 2015) Eco-healing Vacation – Summer vacation to NIE(2016) Our Wetlands Story(2017) Summer Photo Competition(2019)

Autumn



Introducing and experiencing the hidden autumn scenery of NIE.

Thanksgiving special event (2014, 2015) One Amazing Autumn Day (2016) Walk Together the Autumn Path (2017) Small Earth Walking Competition (2018) Autumn Photo Competition (2019) Ecological Experience Exhibition (2019) Writing Contest and Ecological Photo Competition (2019) Winter





Various attractions and experiences in the NIE throughout the winter hibernating season.

Orchid Exhibition (2017, 2018) Winter Recreational Event, Winter Activities (2014, 2015)

Ecological Story in the Recreation Box(2016)

World Musical Instrument Performance (2017, 2018) 15

## Education

## Provides hands-on professional ecology training to learn the importance of ecosystem

## Education

## Education Objectives

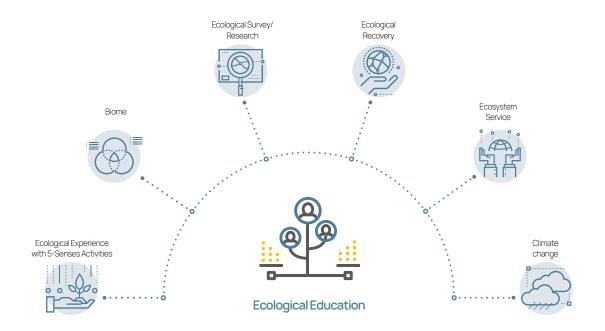


Improving the awareness of ecology conservation and enhancing the ecological sensibility through environmental and ecological education experiences



Training experts in the ecological field based on differentiated specialized subjects

## Education Theme



## **Education Programs**

## Operating wide ranges of education programs targeting from the general public to the experts



Group (Student)

### Exploring Ecology Careers

Career exploration training in various fields related to ecology in conjunction with the free semester system/free grade system

### One-day ecological experience

Training of subject-specific experience activities in conjunction with the school curriculum

### Ecology Career Camp

Ecological career exploration training to experience various ecology fields of NIE



Individual (Family/Student/General

### Family Camp

Family-based ecological experience training for the vitalization of domestic tourism in Korea

### Ecology Science Class

Deeper education centered on experience, observation, and experimentation for students dreaming of becoming ecologists

### **Ecorium Learning Program**

An education to learn the importance of ecosystem through NIE ecological friends



Adult/Professional

### **Public Official Training**

A curriculum that provides knowledge of ecological policy to implement ecology conservation in the field of public policy

### **Teacher Training**

A curriculum for acquisition of educational knowledge and learning methods in ecology and for the enhancement of ecological teaching competency

### Private-sector workforce training course

An advanced theory and practice-oriented curriculum to improve professionalism of the civilian workforce, such as those who participated in natural environment surveys

### Field practice for college students

Customized curriculum to help find a career by providing diverse workplace experience opportunities and ecology education







## Publication

Delivering correct ecological knowledge and ecological information by developing/distributing various types of contents using research/education/exhibition outcomes

## External Relations

## Planning, developing, producing, and supplying ecological knowledge information contents customized for the public



### Textbooks

We develop and distribute various types of books for all citizens to easily access and understand ecological knowledge information.



### Public-Interest Contents

We contribute to social values as an ecological welfare and public institution through development and distribution of contents such as sign language videos and Braille books for the socially disadvantaged.



### **Digital Contents**

We develop and distribute ecological experience contents and e-books using digital technologies such as augmented reality (AR).

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## Children's Books





### Exporting Overseas Patents



7 in Vietnam











## Trans-108

Professional Textbooks



## Outstanding Book Certification



Contributing to the spread of ecological culture and the revitalization of the local economy through win-win cooperation with the region based on eco-tourism

## The central institution in eco-tourism through cooperative projects with eco-tourism areas

- Survey on resources of ecological tourist sites and operation of programs to enhance the capacity of local residents
- Promotion of projects for the diffusion of local eco-tourism and local government ecological culture
- Promotion of personnel specialized in eco-tourism and cooperation projects for eco-tourism consultative bodies
- Exploring ecological tourism contents and participating in internal and external events linking eco-tourism

Eco-tourism Director Course

## Strengthening communication channels by searching for cooperation projects for citizen (resident) participation

- $\cdot$  Collecting opinions on joint cooperation projects with regional consultative bodies and local private organizations
- · Promoting local special products and exploring markets by operating NIE weekend markets
- $\cdot$  Operating expanded programs to promote citizens' self-esteem, such as events inviting local residents
- Discovering participatory regional cooperation projects and preparing projects to revitalize the local economy



Invitational events for local residents



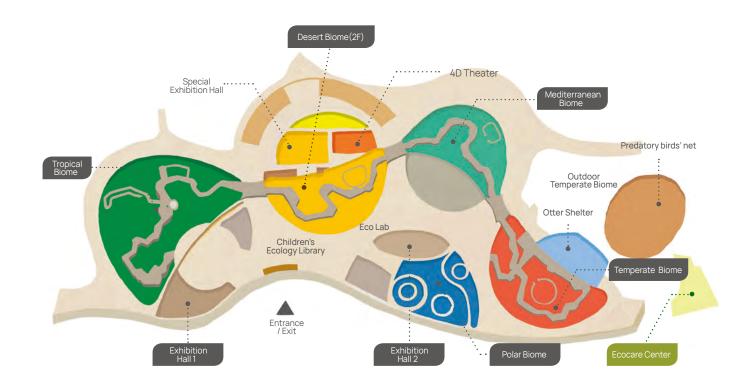
Meeting nature and learning nature

- · Ecorium
- · Outdoor Exhibition Area
- · Visitor Center (Medirium)
- · Research & Training Facility

## Ecorium

As a living ecological exhibition space, Ecorium is a landmark of NIE that offers a vivid experience of the Earth's typical climate-specific ecosystems such as tropical, desert, Mediterranean, temperate, and polar regions.

## **Tropical Biome**



Over 1,400 plant and 260 animal species selected through local and literary surveys are displayed in more than 21,000m<sup>2</sup>, and the climate-specific ecosystems are reproduced as closely as possible to the local environment to help understand the relationship between climate and life. This also consists of a permanent theme exhibition hall where visitors can learn the basic concepts of the ecosystem, a planning exhibition room where various themes are displayed, and an EcoLab where ecological education is given, as well as a children's ecological library and a 4D theater.



Area 73x52x35(m)/3,192m<sup>2</sup> Environment Below 35°C in summer / Above 22°C in winter Humidity 60~90% No. of species 14 species of amphibians & reptiles 130 species of fish 700 species of plants

### Main plants & animals

Animals Aldabra giant tortoise, Mexican axolotl, Pirarucu, Electric eel, Piranha, Cichlid

Plants Coconut tree, Council tree, Monstera, Cissus, Possum grape, Banana, Carambola(Star fruit)

## Reproducing the Rainforest, a paradise of biodiversity in the world

### Tropical Biome

Tropical Biome is a replica of the rainforests, which are disappearing due to the destruction of the environment, in a greenhouse of about 3,000m<sup>2</sup>. The tropical rainforests of Asia, Central and South America and Africa are created by each continent to observe vertical multi-layered structures and various creatures. Including the world's largest freshwater fish, Pirarucu, you can meet a variety of plants and animals that live in rainforests such as 130 species of fish, 14 species of amphibians & reptiles, and about 700 species of tropical plants.





## **Desert Biome**

Area 73x52x12(m)/1,381m<sup>2</sup>

Main plants & animals

No. of species 6 species of reptiles

Humidity 10~70%

Environment Below 35°C in summer / Above 16°C in winter

2 species of mammals

300 species of plants

Animals Western diamondback rattlesnake, Fennec fox,

Plants Golden barrel cactus, Aloe vera, Living stone, Century

plant, Saguaro cactus, Mexican giant carbon

Black-tailed prairie dog, Spiny-tailed monitor, Gila monster

### Experience the vitality in the extreme environment

### Desert Biome

Desert Biome is a space for animals and plants living in a barren desert environment. It consists of Africa's Madagascar Desert and Namib Desert, Sonoran Desert of North America, Mojave Desert and Atacama Desert of South America, and you can meet various desert animals, including Fennec foxes, Rattlesnakes and Frilled-neck lizard. There are also about 300 kinds of cactus and succulent plants on display.





## Mediterranean Biome



Area 52x30x15(m)/1,241m<sup>2</sup> Environment Below 35°C in summer / Above 10°C in winter Humidity 40~60% No. of species 7 species of amphibians 300 species of plants

## Main plants & animals

Animals Dumpy tree frog, Fire salamander, Green toad, Tiger salamander

Plants Olive tree, Dragon blood tree, Canary Island date palm, Oleander, Bird of paradise flower, Bottlebrush tree, Lemon, Bay laurel

## Be mesmerized by the Mediterranean scent

### Mediterranean Biome

Mediterranean biome is a replica of the Mediterranean climate of South Africa, the California coast, the Canary Islands, and Australia. The Mediterranean accounts for only 1.7% of the land area but is a repository of biodiversity, accounting for about 25% of the world's plant species. Especially there are about 25,000 species of plants in the European Mediterranean Sea, accounting for 64% of the entire Mediterranean region. Mediterranean Biome is where you can enjoy the Mediterranean Sea, famous for its beautiful nature with your five senses. When you enter the exhibition hall, you can feel the Mediterranean Sea first with the scent of herbs, Olive trees, and Eucalyptus





## **Temperate Biome**

## Meeting the temperate forests of the Korean Peninsula and the vegetation of Jeju Island

### Temperate Biome



Area 62x33x12(m)/1,671m2 Environment Room temperature in summer / Above 0°C in winter Humidity 50~60% No. of species 9 species of amphibians & reptiles 1 species of mammal, 1 species of bird 40 species of fish, 120 species of plants

### Main plants & animals

- Animals Toad, Tree frog, Mountain grass lizard, Red banded snake, Red-sided water snake, Sturgeon, Common otter
- Plants Red-bark oak, Camphor tree, Yellowish velvety-leaf litsea, Camellia tree, Siebold's chinguapin, Sweet viburnum

Temperate Biome is a replica of the Korean Peninsula's climate environment and ecosystem with four distinct seasons. It consists of a warm forest and an outer valley and a temperate forest, each element is fed with a selection of subject species. Particularly, to imitate Jeju Island, the representative temperate forest of the Korean Peninsula, the Gotjawal terrain and ponds were constructed, with displaying Jeju's Gotjawal plants, amphibians, reptiles, and fish that live in the Korean Peninsula. Visitors can observe temperate animals such as Otters and Golden eagles in the outdoor space reproducing the mountainous and valley of the Korean Peninsula.





## Polar Biome



Area 17.8x74x7.5(m)/1,316m<sup>2</sup> Environment Below 10°C Humidity 50~60% No. of species 2 species of birds

Main plants & animals Animals Gentoo penguin, Chinstrap penguin

### Experience polar climates from the South Pole to the North Pole

### Polar Biome

Polar Biome is a replica of the ecological changes from temperate to polar regions. Unlike other exhibits that displayed living animals and plants, the Biome creates an ecosystem of polar climates with animal stuffed specimens, graphics, images and panels. Starting with Gaema Plateau, the coldest part of the Korea, people can experience various polar regions such as the taiga forest, the tundra region, the Arctic ice climate, and the Antarctic penguin village, and especially this is the only place in Korea where you can meet Gentoo penguin and Chinstrap penguins.





## Exhibition Hall (1, 2) 4D Theater / Special Exhibition Hall

## Children's Ecology Library

**Area** 300m<sup>2</sup>

# Ecology through video

Area Exhibition Hall 1-587m<sup>2</sup>

Exhibition Hall 2 - 546m<sup>2</sup> 4D Theater - 318m<sup>2</sup> (107 seats) Special Exhibition Hall - 500m<sup>2</sup>

Exhibition Hall displays items to inform basic concepts of ecology, definitions of ecosystems and biome, ecosystem services, and meaning of ecological resource conservation. At the 4D Theater, you can enjoy short 4D animation films that tell the story of the ecosystem, including <The Adventures of Kangsan>, which arouses attention on alien species, and <Mother Forest>, which is a moving story with salmon's long journey. In addition, the Special Exhibition Hall provides new experiences and knowledge on a variety of topics enhancing the ecological characteristics.

## Children's Eco-Culture Space with 12,000 Ecological Books

Located in the Ecorium lobby, 'Children's Ecology Library' provides ecological information to children and adults visiting to the NIE; and is a venue for various children's ecological cultural events. We have more than 12,000 ecological books (natural science, basic science, ecological environment, etc.) for infants, children and youth; we also offer digital search and audio book sections. Every Saturday, there is an event reading ecological stories and a children's participation program such as 'Environmental Story Writers Invited Book Concert'.



**EcoCare Center** 

Area Approx. 2,600m<sup>2</sup>

EcoCare Center was built to prevent animal disease outbreaks such as highly pathogenic avian influenza (HPAI) by isolating birds indoors. Besides, conservation of CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) animals including Grey Parrot and Gibbons those were confiscated from illegal trade is another important goal of this facility.



















## Visitor Center (Medirium)

Area 3,537m2

## Facility for disease prevention and CITES animals

## Ecological experience through the digital technology

Visitor center is a multi-purpose space with an ecological media experience center, observatory, and Seocheon tourist information center.

Especially, the ecological media experience center "Medirium" is designed to help visitors easily enjoy ecological topics by utilizing digital technologies such as augmented reality (AR) and motion recognition.









## Geumguri Zone

An area of wetlands and streams with life

## Yonghwasil Pond

One of the reasons why NIE is here is because there is a Yonghwasil Pond that can provide a steady supply of water throughout the land. This kept the mud from the floor from being sub-cultivated for a long time, and expanded the area of the nails to hold a lot of water; the surrounding slope was gently trimmed to make it a gradual aquatic space. In the low water levels, we planted False winnow willow, Rose-gold pussy willow, and Korean willow to provide a safe haven for water-loving creatures.



## Wetlands Garden

NIE's Wetlands Garden was created by depicting the Darangnon, which was often seen in rural areas of Korea before the farmland was cleaned up. Visitors can observe and experience the wetlands and ecosystems, which are natural resources' repository. The wetlands of the Korean Peninsula, modeled after various inland wetlands in Korea, are divided into living types; the aquatic botanical gardens and amphibian wetlands, which are habitats for the restoration of endangered species such as Korean golden frogs.





## Hadaram Area

Hadaram Playground

## Forests of the Korean Peninsula

## Geumguri Pond

This is a pond formed at a slower flow rate as the width of the stream running through the wetlands of the NIE. This pond became a small world for animals living on the ground, also providing a foothold for the new world. At the time of the creation of the ecological center, the endangered wild creature Class II, Korean golden frog, was discovered, and the pond was named the Geumguri Pond. In August 2019, NIE released 600 Korean golden frogs to the floor of the Wetlands Learning Area and began moving organisms and studying habitats.





## Where you can meet the nature of Korean peninsula

It is a space where visitors can meet native animals and plants of the Korean Peninsula through play. Visitors can use rides embodying animals and plants that can be seen in the ecosystem as characters. Nearby, there are facilities including Hadaram shelter where can eat self-packed lunch, convenience stores, and washroom.

Korea's vegetation belts are divided into Warm temperate evergreen broad leaved forest, Warm temperate deciduous broad-leaved forest, Temperate deciduous broad-leaved forest, Cool temperate deciduous broad-leaved forest, Subpolar Coniferous Forest. This is a replica of 13 forests of Korea's climate zone, including Jeju Island. The creation of the Forests of the Korean peninsula was based on the results of the local survey. After installing a 20mx20m square at the location selected for the local survey, we examined all plants appearing in the square to measure their spatial location.

The Alpine Garden, consisting of 10 sections, including Alpine Rock Site, Alpine Dryland, Alpine lime rock zone, Alpine tubular forest, Alpine wetlands forest, is a space for observing/ obtaining alpine plants which have adapted to the harsh environment. You can observe unique plants such as Mt. Seorak, Mt. Jiri, Mt. Halla, and Mt. Baekdu, which are the most representative alpine regions in Korea.







## Godaeryuk Zone

A place where you can meet Siberian roe deer, Water deer, and Yellow-throated martens.

## Deer Park

As a habitat of Korea's representative even-toed hoofed mammals, you can see the roe deer and water deer, which were not easily observed in the wild because of their cautiousness, and Long-tailed goral, which is classified as a



Class I endangered wildlife. The Water deer is a common animal in Korea, but it is worth preserving as it lives only in parts of China and on the Korean Peninsula. In order to create their habitat environment, the Deer park planted Sawtooth oak, Sawleaf zelkova, East Asian hackberry, and Sargent's cherrys.

## Northeast Asian Forest Animal **Protective Facility**

This facility is designed to protect endangered animals in Northeast Asia and it has

created a habitat environment suitable for the life of forest animals. In this place, you can see Black stork , Class I endangered wildlife in Korea, Yellow-throated marten of Class II, and Mandarin duck, which is a close proximity.



## **Ecologists'** Trails

Charles Darwin and The Grants Trail

Distance 2.2km Time approx.30min.

## Jane Goodall Trail Distance 1km Time approx. 15min.

## Najeo-eo Zone

Space for birds to rest and flourish

## Najeo-eo Pond

Najeoeo Pond was created by imitating the typical pond ecosystem in Korea, and it was created by flowing water from surrounding mountains where there were paddy fields and small puddles. Near the pond,



the waterfront Korean willow and False winnow willow are placed to form a buffered feeding zone; it is equipped with a variety of plants ranging from herbaceous plant to woody plants by inducing the natural settlement of wetlands, water purification plants, water side plants, and floating/brown plants

## Multiflora rose Hill

Multiflora rose was also popularas a song.... The "spring cessation" period, which had nothing to eat before barley was around, was the time of the Multiflora rose blossoming, so it has been synonymous with



people ever since. NIE built the Multiflora rose Hill over a two-year period from 2014 when it opened to the public. Enter NIE from May to June every year, and you will find the White Multiflora rose Hill, where visitors will be greeted with a fragrant smell from the right.

## Thoreau Trail Distance 1.3km Time approx. 20min.

## A walking path recounting the life of an ecologist





On November 24, 2015, a 20-themed forest trail was created to commemorate the life and achievements of Darwin and his successor, the world's leading evolutionary biologists Grants.





On November 23, 2014, in commemoration of the visit of Dr. Jane Goodall, world-renowned primatologist and environmentalist, to the National Institute of Ecology, Jane Goodall Trail was created to ponder upon the lessons from her study and life and the idea of "Love towards Life."





In honor of Henry David Thoreau, author of the first environmental book < Walden; or Life in the Woods> and a world-renowned naturalist philosopher who first used the term 'ecology'; this was created around Yonghwasil Pond under eight themes, reflecting on the lessons, achievements and philosophies of his life.

## **Research Education Building**

Main Building B1, 3F 8, 419m<sup>2</sup> Ecological Education Building B1, 2F3,200m<sup>2</sup> Ecological Restoration Building B1, 2F 5,234m<sup>2</sup>

The research education facilities located outside the exhibition areas are designed to diagnose/ forecast changes in the ecosystem due to climate change and other environmental changes, consisting of the Main building for research that contributes to biodiversity conservation by restoring damaged ecosystems; the Ecological education building, which provides experience-oriented ecological education linked to research and education; and the Ecological restoration building, which carries out various restoration projects, including the restoration of habitat for damaged ecosystems and endangered species, to enhance understanding.





## Visitor Accomodations

Area 2.930m<sup>2</sup> No. of people 152 (14 four-person rooms, 15 six-person rooms)

This is a lodging space for students who are staying for ecological education, visitors to the family unit, researchers, and foreign exchange staff. From the design phase, we applied eco-friendly building technologies and energy-saving elements, and used environmentally friendly external materials to blend in with the surrounding environment. We planted Quince tree, Plum blossom, and Japanese cornel in the neighborhood to make our users feel friendly.







## User Guide





Entrance



Ecological **Exploration** Program



Time







Spring, Summer & Fall (Mar-Oct) 9:30-18:00 Winter(Nov-Feb) 9:30-17:00

I Last Entrance I 1 hour before end of tour IClosed I Every Monday (If Monday is a holiday, then closed on the next first business day)









Free I aged 4 and below, aged 65 and above, handicapped (Rank 1~3, including 1 guardian), people of national merit and their bereaved families (National merit certificate, holder of national merit card) and family (Direct relation and spouse: holder of family relation certificate), Basic needs recipient, Group leader(1 person

50% discount I Seocheon resident (must be yourself), Multi-children families (with multi-children family card) 30% discount | People with green card

### Specialized ecological education to understand the interrelationship and conservation of ecosystem & biodiversity



5,000won

Group

Elementary 4.000won



High

Individual 7.000won Group 6.000won



**Application I** Online application at the website (Contact: 041-950-5893)

I Guide Location I

Ecorium, Outdoor (Wetlands Ecology Center, Korean Peninsula Forest)

Ecological Story with a vivid description by the ecological guide

## I Application I

Reservation through website or at Ecorium Children's Ecology Library on a first-come-first-served basis (20 per time)

## Directions

Address\_National Institute of Ecology, 1210, Geumgang-ro, Maseo-myeon, Seocheon-gun, Chungnam Tel\_(82) (41) 950-5300 Website\_www.nie.re.kr





### Vehicle When coming from Seohaean Expressway Songnae IS Seocheon IC Seocheon IC 🖻 National Route 4 (to Gunsan) 🖻 Songnae IS, National Route 21 🗈 NIE Main Gate When coming from Seocheon Gongju Expressway East Seocheon IC 🖻 National Route 29(to Seocheon) . Geum River Estuary Bank, National Route 21(to Seocheon) Janghang Station NIE Main Gate Public By Janghang Line Get off at Janghang station, go to the ticket office (5 minutes on foot) Transportation National Institute East Seocheon IC of Ecology By Intercity Bus Get off at Seocheon Intercity Bus Terminal, Janghang Bus Public Bird Ecosystem 29 Exhibition Terminal, Gunsan Intercity Bus Terminal, then take a local bus or taxi Songnae IS Geumgang Estuary Bank 1,123 small vehicles, 52 buses Parking