Ministry of the Environment
Government of Japan

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Japan’s wildlife

What we can do to help

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Protecting endangered species means protecting our lives and the history of life.

Did you know that Japan has biological diversity in the world?
Currently, it is thought that over approximately 300 thousand species of wild fauna and flora in Japan, including species that have not yet been discovered.
The rich and unique natural environment of Japan was created from its land that stretches north to south, the difference in elevation from the sea to mountains, and the thousands of islands.
40% of mammals, 60% of reptiles and 80% of amphibians are indigenous.
In such a country as Japan, many species are now facing threats of extinction.
Protecting living things from extinction is important, as it also means protecting the long history of life.
However, it is also related to protecting our very own lives.

Each species is the result of the long history of life.

All living organisms, including humans, have evolved into their current shape through their long history living on earth. Each species is the crystallization of the long history of life and therefore has irreplaceable value.

Our lives are supported by the biodiversity

Our lives are sustained by the blessings of nature formed through the interactions between diverse species. To protect this natural environment in a delicate and complicated balance, it is essential to protect each and every species from extinction.

Endangered species are treasures for communities

Endangered species sometimes connect to regional cultures and industries. Some species have a history within Japan's folklore and traditional events. Protecting these symbolic species helps reflect the regions' identity.

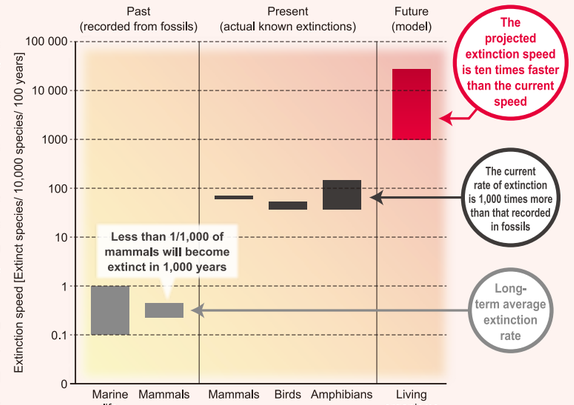
More species are now going extinct.

The speed at which various species have gone extinct on our earth has gone up 1,000 times in the past 100 years.

Although there are many reasons for why a species goes extinct, one of the greatest factors is the effect of human activities.

According to the Millennium Ecosystem Assessment executed by the United Nations from 2001 to 2005, it is calculated that the rate of extinction in fossil eras was 0.1 to 1 among 10,000 species in a century. However, by the actual number of extinct species in the last 100 years, it is said that the speed was approximately 100 in each 10,000 species, making the speed 1,000 times faster if unrecognized ones are also counted.

One distinct change on earth within the past 100 years is the expansion of human activity. We cannot say that all extinctions are "the fault of humans," but we should not be oblivious of the major impact human activities have on the environment.



Source: Created by the Ministry of the Environment from the Millennium Ecosystem Assessment

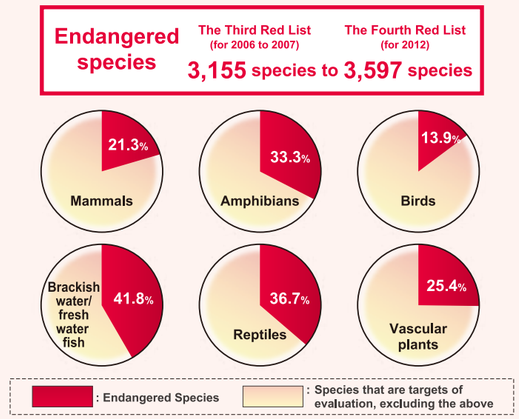
An increase of endangered species on the "Red List"

More species are listed as endangered species on the "Red List," an evaluation of the probability of extinction made by the Ministry of the Environment.

The total number of endangered species (Class Ⅰ (CR, EN) and Class Ⅱ (VU)) were 3,155 species on the third edition released in 2006 to 2007. However, 422 species were added in the fourth list (released 2012), making the list reach 3,597 species.

Although one reason behind this was the expansion of target species, this result made it very clear that the wildlife within Japan was still in very severe conditions.

Some types had a higher ratio of being endangered, such as approximately 40% of brackish water/freshwater fish, and 25% of vascular plants.

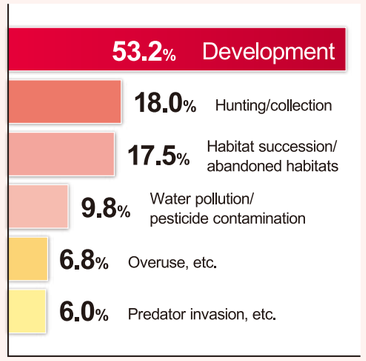


Why are endangered species increasing?

There are many reasons why living organisms face extinction. Development has a major impact on many species, making it the cause for more than half of all endangered species. Other reasons include overhunting and collection, deterioration of habitat which had been maintained by human but abandoned, and invasive alien species among others. What is more, many living things are possibly severely affected by major changes in the earth's environment, such as global warming. Here are four categories to think about the reasons: "human activity (development/ overhunting/illegal taking)", "decreased human interaction with nature", "invasive alien species", and "global environmental changes".

Main threats to endangered species

Past development is said to be the largest threat in endangering species.



*Graph data is from the "Inquiry Report of the Conservation Status of Endangered Species in Japan (The Ministry of the Environment 2012")

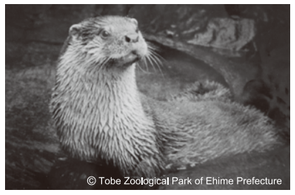
1 Human activity (development/overhunting/illegal taking)

One of the major factors threatening species to extinction is the direct effect of human activities. This includes destruction of natural habitats due to development activities such as logging, road construction and river improvement, as well as direct capture or collection for commercial or viewing purposes.

Of the endangered species, 53% had their numbers reduced owing to development, and 18% by capture and collection.

Wildlife threatened to extinction due to human activity

Japanese River Otter (*Lutra lutra nippon*) EX



The Japanese River Otter lived in the mid and lower streams of rivers and around ocean shores. They mainly fed on fish and crustaceans. The otters were overhunted in the Meiji era for their fur, and the rapid economic growth of Japan brought development and degradation of water quality, causing their numbers to drop dramatically. An otter was last sighted in Susaki City, Kochi Prefecture in 1979. And since there have been no recorded sightings since then, the Japanese River Otter has been included in the Fourth Red List as an extinct animal.

Japanese Eel (*Anguilla Japonica*) EN

The Japanese Eel (*Anguilla Japonica*) was newly selected as an endangered species categorized in Class IB (EN) in the Fourth Red List. A large drop in their population has been confirmed, due to over-capturing for food, degradation of living habitats due to factors such as development, and changes in the ocean environment. This does not mean that we will never be able to eat these eels any more, but we must conserve and manage the species as a natural resource to sustainably use.

Cypripedium macranthos* var. *rebunense EN

The *Cypripedium macranthos* var. *rebunense* is a perennial plant of the orchid family that can be seen only in Rebun Island in Hokkaido. Because their habitat is extremely limited and they had been over-picked in the past, currently, only a few dozen have been confirmed in the wild. Thoughtlessly picking rare species may cause them to become extinct.

2 Decreased human interaction with nature

There are species perishing when humans cease to interact with the natural environment. "Satoyama" is a type of environment which has been maintained by human and provides resources to sustain human lives, such as fuel wood groves and secondary grasslands. Many species have adapted to such an environment influenced by human management as the result of the long history of human-wildlife interaction. However, as the industry structure changed and these woodlands and grasslands ceased to be maintained, the habitats for many animals and plants were lost.

For instance, when humans stop taking trees in forests for fuel, the forests will become dark, and living things that prefer brighter condition will no longer be able to live there. If grasslands are left and not maintained, they will gradually turn into forest. Animals and plants that can live only on grassy areas will no longer be observed.

Moreover, along with this change in environment, the decrease in hunters has caused a large spike in the Japanese deer (*Cervus nippon*) population, and some species are decreasing in number due to the damage caused by the deer's feeding.

Species with reduced numbers due to the decreased human interaction with nature

Balloon flower (*Platycodon grandiflorus*) VU

The balloon flower (*Platycodon grandiflorus*) is a perennial plant that grows in grasslands. It was loved as one of the seven autumnal flowers in Japan. However, as needs for thatched roofs and feed for livestock decreased, grassy fields were no longer needed and were thus abandoned, so balloon flower (*Platycodon grandiflorus*) numbers have plummeted and have become extinct in some areas.

Pithecops fulgens tsushimanus VU

Pithecops fulgens tsushimanus is a subspecies of small butterfly that can only be found in the Tsushima islands of Nagasaki Prefecture. The viable habitat for these butterflies is almost non-existent due to the loss of their food source *Desmodium podocarpum* subsp. *Oxyphyllum*, which is eaten by deer. Currently, it is one of the most endangered butterfly species in Japan.

3 Invasive alien species

Alien species are animals and plants that have been introduced from their original habitat to another region. Those that are especially invasive (invasive alien species) deteriorate indigenous ecosystems region as aggressive predators or by dominating habitats or exhausting food supply. Islands isolated from other regions by the oceans are often home to many endemic species, which suffer greatly from invasive alien species.

Animals whose population has decreased due to invasive alien species

Okinawa rail (*Gallirallus okinawae*) CR

The Okinawa rail (*Gallirallus okinawae*) is a flightless bird that can only be found in the Yambaru, the North area of the Okinawa mainland. There were an estimated 1,800 birds when they were first found in 1981. However, the numbers went down to approximately 700 in 2005. The main factor behind this decrease is a non-native mongoose feeds on these birds. The mongoose was introduced to Okinawa approximately 100 years ago. After its introduction, the mongoose expanded its habitat and is the cause of serious ecosystem damage throughout Okinawa at present.

Invasive alien species: the mongoose

4 Global Environmental Changes

There is a possibility that changes in the earth's environment, such as global warming, will cause a severe impact on not only our lives but also the living conditions of wildlife. Some clear examples of this are the polar bears (*Ursus maritimus*) losing their homes due to the ice cap melting in the Arctic region, and the coral dying out due to the rise in ocean temperatures.

There are reports projecting that the climate zone will move four to five kilometers north in Japan, if the earth's average temperature rises three to four degrees Celsius by the year 2100. It is indicated that this type of change will reduce areas that are optimal for species that prefer alpine and colder environments.

Wildlife species believed to be affected by changes in the global environment

Ptarmigan (*Lagopus mutus japonicus*) EN

The ptarmigan (*Lagopus mutus japonicus*) is a bird that lives in the alpine areas in the central part of Japan. It is forecasted that optimal habitat ranges move to higher altitude with the progress of global warming. For this reason, the threats to the ptarmigan (*Lagopus mutus japonicus*) is greater, as they have no higher elevation in which they can go to.

Conservation measures for endangered species

--The mechanisms of The Law for the Conservation of Endangered Species of Wild Fauna and Flora (Hereinafter "LCES") --

In Japan, it is strictly regulated to handle individual organisms designated as National/International Endangered Species under the Law for the Conservation of Endangered Species of Wild Fauna and Flora (LCES). What is more, conservation of National Endangered Species is promoted by implementing Protection and Recovery Programs and designating Natural Habitat Conservation Areas.

Endangered species in Japan

Species that is assessed to have a high possibility of extinction through the Red List assessment may be designated as "National Endangered Species (NES)" as species that needs special measures to ensure its survival. As of 2014, there were 89 NESs, and the Ministry of the Environment aims to designate an additional 300 NES by the year 2020.

Development of the Red List and Red Data Book

↓

National Endangered Species of Wild Fauna and Flora in Japan (208 species) As of January 2017

Threatened overseas species

Species listed in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, species within the Conventions (hereinafter "CITES") and Agreements for Protection of Migratory Birds (U.S.A., Russia, Australia) are designated (excluding NES) as International Endangered Species that are to be conserved through international cooperation. There are currently 789 species designated as International Endangered Species.

Species in Appendix I of the CITES

Species within the Conventions and Agreements for Protection of Migratory Birds

↓

International Endangered Species (789 species) As of January 2017

Regulation of Treatment of Individual Organisms, etc.

To protect endangered species, it is effective to prohibit activities directly impacting them such as capture or collecting. Moreover, it is regulated that commercial trade of individual organisms, parts and processed products to prevent illegal activities such as poaching.

Prohibition of taking	As a rule, it is prohibited tocapture, collect, kill or wound and damage (hereinafter called "taking") living individual organisms of NES.
Prohibition of transferring	As a rule, it is prohibited to transfer, receive a transfer of, deliver and receive a delivery of (hereinafter "transfer") , as well as display advertise individual organisms (dead or alive), parts and processed products of NES and International Endangered Species (hereinafter "IES").
Prohibition of export and import	As a rule, it is prohibited to export and import NES. Additionally, an approval is required to export or import IES.

	Designation	Taking	Display/ advertisement	transfer	Export and import	Examples of designated species
National Endangered Species	Species of bilateral agreements for migratory birds	Prohibited	Prohibited	Prohibited	Prohibited (Certificates need to be attached at import)	Japanese Crested ibis (*Nipponia Nippon*), Goshawk (*Accipiter gentilis fujiyamae*), Japanese crane (*Grus japonensis*), Blakiston's fish owl (*Ketupa blakistoni blakistoni*), etc.
	Species threatened to extinction	Prohibited	Prohibited	Prohibited	Export is prohibited	Iriomote cat (*Prionailurus bengalensis iriomotensis*), *Cheirotonus jambar*, etc.
International Endangered Species	Species of bilateral agreements for migratory birds	—	Prohibited	Prohibited	With Approval	White-naped crane (*Grus vipio*), little tern (*Sterna albifrons sinensis*), Puerto Rican amazon (*Amazona vittata*), etc.
	Species in Appendix I of the CITES	—	Prohibited except for cases with registration		With Approval	Giant panda (*Ailuropoda melanoleuca*), all types of gibbons (*Hylobatidae*), scarlet macaw (*Ara macao*), radiated tortoise (*Astrochelys radiata*), asian arowana (*Scleropages formosus*), etc.

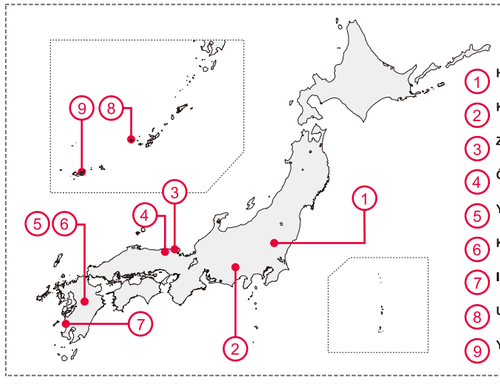
Natural habitat conservation areas

There is a necessity to properly conserve the habitat of endangered species for their conservation. To protect these habitats, regulation on activities such as construction on designated areas can be effective.

When it deems necessary, habitats of NES are designated as natural habitat conservation areas under the LCES. There are two zoning categories in a Natural Habitat Conservation Area, which are "special Management zone" and "monitoring zone," and development activities are regulated accordingly.

Currently, there are nine areas designated, totaling 885 ha of natural habitat.

Special Management Zone	Important areas such as spawning, breeding and feeding sites are designated as Special Management Zone. Permit from the Minister of the Environment is needed for new construction of structures, changing the form of land, excavation of minerals, reclamation of land from a water area by landfill, or felling of trees and bamboo etc.
Monitoring Zone	Prior notification to the Minister of the Environment is needed for new construction of structures, changing the form of land, excavation of minerals, and reclamation of land from a water area by landfill etc.



1. **Handa Natural Habitat Conservation Area for *Tanakia tanago***
   (Otawara City, Tochigi Prefecture)
2. **Kitadake Natural Habitat Conservation Area for *Callianthemum insigne* var. *hondoense***
   (Minami-Alps City, Yamanashi Prefecture)
3. **Zennōji Nagaoka Natural Habitat Conservation Area for *Hynobius abei***
   (Kyotango City, Kyoto Prefecture)
4. **Ōoka Natural Habitat Conservation Area for *Hynobius abei***
   (Toyooka City, Hyogo Prefecture)
5. **Yamasako Natural Habitat Conservation Area for *Polemonium kiushianum***
   (Takamori Town, Aso County, Kumamoto Prefecture)
6. **Kitaobasama Natural Habitat Conservation Area for *Polemonium kiushianum***
   (Takamori Town, Aso County, Kumamoto Prefecture)
7. **Imutaike Natural Habitat Conservation Area for *Libellula angelina***
   (Satsumasendai City, Kagoshima Prefecture)
8. **Uegusukudake Natural Habitat Conservation Area for *Opisthotropis kikuzatoi***
   (Kumejima Town, Okinawa Prefecture)
9. **Yonehara Natural Habitat Conservation Area for *Platypleura albivannata***
   (Ishigaki City, Okinawa Prefecture)

Protection and Recovery Program

Protection and Recovery Programs are formulated and implemented for those designated as NES, as necessary, to promote their propagation and to maintain the habitats' conditions. Please refer to page seven and on for details.

Restoration efforts

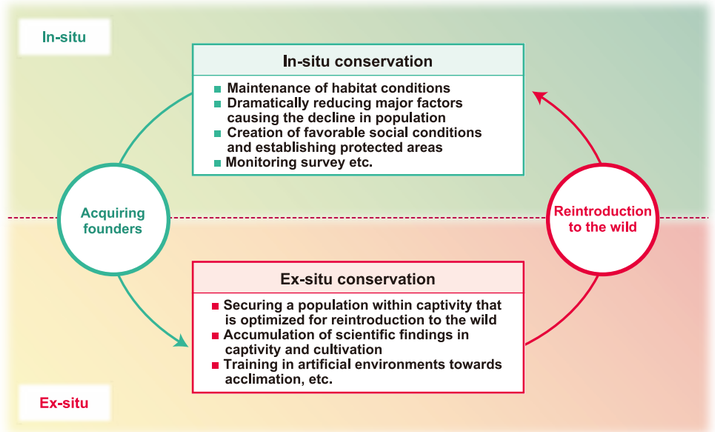
-- Protection and Recovery Programs --

The Ministry of the Environment develops Protection and Recovery Programs for species to maintain and restore their population numbers, and implements various activities such as collecting data of the statuses, maintenance of their habitats and breeding in captivity. The Programs have been established for 63 species at the moment.

In-situ and ex-situ conservation

To protect endangered species, on-site conservation in their natural habitats is the first priority. It is necessary to promote effective conservation efforts by clarifying the factors for the decline in population and removing them. For instance, prohibiting activities such as capturing is effective for species having declined by poaching. If the wildlife's habitat itself is decreasing/degrading, there is a need to make efforts towards its maintenance and improvement.

However, if these in-situ conservation efforts are insufficient in preventing a species' extinction, consideration towards breeding in captivity may be needed, with the future goal of reintroduction into the wild.



Cooperation with the Japanese Association of Zoos and Aquariums

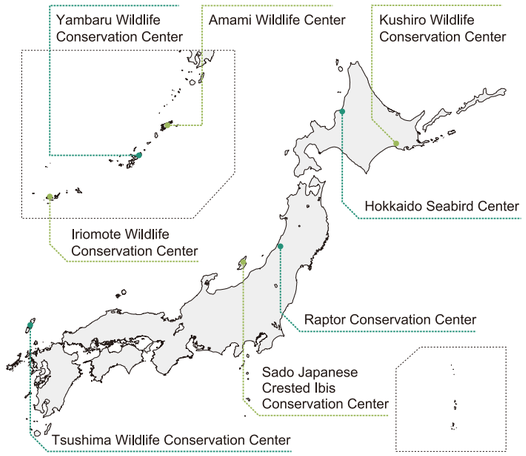
Specialized knowledge and proper facilities are needed for ex-situ conservation activities such as breeding in captivity. For this reason, the Japanese Association of Zoos and Aquariums (JAZA, Public Interest Incorporated Association) and the ministry agreed on "Framework Agreement on Biodiversity Conservation Promotion" to enhance the collaboration. The agreement enables to collaborate with zoos and aquariums through JAZA and promote planned and coordinated breeding activities between multiple parks. Moreover, zoos and aquariums play an important role in raising the public awareness as they host many visitors.

Currently, the Ministry of the Environment and JAZA is cooperating in ex-situ conservation for Tsushima Leopard Cat (*Prionailurus bengalensis euptilurus*) and Ptarmigan (*Lagopus mutus japonicus*). Establishing an optimal breeding method for the Ptarmigan (*Lagopus mutus japonicus*) has been progressing with the close-related subspecies *L. m. hyperborea Sundevall*, which lives in Scandinavia. In the spring of 2015, ex-situ conservation started by introducing wild Ptarmigan (*Lagopus mutus japonicus*) eggs for artificial care.

L. m. hyperborea Sundevall being raised in captivity.

Wildlife Conservation Center

The Ministry of the Environment has established wildlife conservation centers as bases to implement the Protection and Recovery Programs in regions where endangered species live. These centers promote public awareness by exhibitions and interpretation to visitors, and carry out research and study activities.



Hokkaido Seabird Center

Location: Haboro Town, Tomamae County, Hokkaido Prefecture

Main target species: **Common murre (*Uria aalge inornata*), spectacled guillemot (*Cepphus carbo*)**

- Promotion of research and studies
- Implementation of protection and recovery programs
- Exhibition and interpretation

Common murre (*Uria aalge inornata*),

Kushiro Wildlife Conservation Center

Location: Kushiro City, Hokkaido Prefecture

Main target species: **Blakiston's fish owl (*Ketupa blakistoni blakistoni*), Japanese crane (*Grus japonensis*), white-tailed eagle (*Haliaeetus albicilla albicilla*), Steller's sea eagle (*Haliaeetus pelagicus pelagicus*)**

- Promotion of research and studies
- Conservation of wildlife in the region
- Rescue operation of wounded designated species
- Exhibition and interpretation

Blakiston's fish owl (*Ketupa blakistoni blakistoni*)

Amami Wildlife Center

Location: Yamato Village, Oshima County, Kagoshima Prefecture

Main target species: **Amami rabbit (*Pentalagus furnessi*), White's thrush (*Zoothera dauma major*), Amami Woodcock (*Scolopax mira*)**

- Promotion of research and studies
- Implementation of protection and recovery programs
- Exhibition and interpretation

White's thrush (*Zoothera dauma major*)

Raptor Conservation Center

Location: Sakata City, Yamagata Prefecture

Main target species: **Golden eagle (*Aquila chrysaetos japonica*)**

- Promotion of research and studies
- Promotion of conservation activities of raptors
- Exhibition and interpretation

Golden eagle (*Aquila chrysaetos japonica*)

Yambaru Wildlife Conservation Center

Location: Kunigami Village, Kunigami County, Okinawa Prefecture

Main target species: **Okinawa woodpecker (*Sapheopipo noguchii*), Okinawa rail (*Gallirallus okinawae*), *Cheirotonus jambar***

- Promotion of research and studies
- Implementation of protection and recovery programs
- Exhibition and interpretation

Okinawa woodpecker (*Sapheopipo noguchii*)

Sado Japanese Crested Ibis Conservation Center

Location: Sado City, Niigata Prefecture

Main target species: **Japanese Crested Ibis (*Nipponia nippon*)**

- Breeding the ibises in captivity
- Conducting training for acclimation
- Reintroduction to the wild

Japanese Crested Ibis (*Nipponia nippon*)

Iriomote Wildlife Conservation Center

Location: Taketomi Town, Yaeyama County, Okinawa Prefecture

Main target species: **Iriomote cat (*Prionailurus bengalensis iriomotensis*)**

- Promotion of research and studies
- Implementation of protection and recovery programs
- Exhibition and interpretation

Iriomote cat (*Prionailurus bengalensis iriomotensis*)

Tsushima Wildlife Conservation Center

Location: Tsushima City, Nagasaki Prefecture

Main target species: **Tsushima leopard cat (*Prionailurus bengalensis euptilurus*)**

- Promoting research and studies
- Implementation of protection and recovery programs
- Rescue operation of wounded cats
- Captive breeding
- Exhibition and interpretation
- Coordinating stakeholders for co-existence with the cats

Tsushima leopard cat (*Prionailurus bengalensis euptilurus*)

Examples of Protection and Recovery Programs

Tsushima leopard cat (*Prionailurus bengalensis euptilurus*)

Mammals | Scientific name: *Prionailurus bengalensis euptilurus* | *Carnivora* *Felidae* | Existing population: Less than 100 | CR

Summary
Only found in the Tsushima area of Nagasaki Prefecture. The size is similar to domesticated cats. It has white spots behind its ears and a striped forehead.

Reasons behind decline
- Degradation of Satoyama environment
- Traffic accidents
- The effects of domesticated cats and dogs
- Reduction of animal resources to feed on due to scarce vegetation caused by deer

Summary of protection and recovery program
- In-situ: monitoring of the status, maintenance and improvement of habitats, measures against traffic accidents, promotion of proper raising of domestic cats
- Ex-situ: captive breeding in cooperation with JAZA (30 cats at nine zoos as of March 2015)

Amami rabbit (*Pentalagus furnessi*)

Mammals | Scientific name: *Pentalagus furnessi* | *Lagomorpha* *Leporidae* | Existing population: Approximately 2,000 to 5,000 | EN

Summary
This rabbit retains some primitive features and is seen only in Tokunoshima Island and Amami-Oshima Island in Kagoshima Prefecture. The rabbits dig different holes to rest and raise their offspring.

Reasons behind decline
- The loss and segmentation of the forests due to deforestation and road construction
- Casualties due to traffic accidents and predators such as mongoose and feral dogs and cats

Summary of protection and recovery program
- Eradication program of the mongoose in Amami-oshima (The rabbit population has been increasing recently)
- Pilot capturing of feral cats in Tokunoshima

Japanese Crested Ibis (*Nipponia nippon*)

Aves | Scientific name: *Nipponia nippon* | *Pelecaniformes* *Threskiornithidae* | Existing population: 136 birds (As of March 2015) | EW

Summary
Reintroducing project is ongoing in Sadogashima, Niigata prefecture. It is a middle-sized bird that feeds on loaches, frogs and earthworms found in rice paddies.

Reasons behind decline
Once extinct in the wild for the following reasons:
- Overhunting
- Loss of the habitat due to deforestation
- Reduced the ibises' food supply caused by changes in agriculture

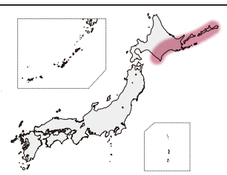
Summary of protection and recovery program
- Captive breeding with founders given from China
- Reintroduction to the wild from 2008

In 2016, chicks born to a pair of ibises born in the wild safely left their nest for the first in the last 40 years.

Blakiston's fish owl (*Ketupa blakistoni blakistoni*)

Aves | Scientific name: *Ketupa blakistoni blakistoni* | *Strigiformes* *Strigidae* | Existing population: Approximately 140 (Excluding the Northern Territories) | CR

Summary
It is the largest owl in Japan found only in Hokkaido. They feed on fish and nest in cavities in large trees in forests with streams.



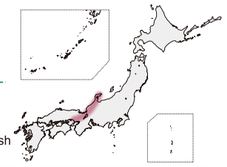
Reasons behind decline
- Loss of their habitat due to land use changes from forest to farmland and housing area
- Loss of optimal nesting place by deforestation
- Reduced food supply caused by dam construction and river improvement

Summary of protection and recovery program
- Feeding
- Installing nesting boxes
- Maintenance and nurturing their foraging environment
- Protecting and fostering nesting trees
- Reintroduction to the wild

Abe's salamander (*Hynobius abei*)

Amphibian | Scientific name: *Hynobius abei* | *Caudata* *Hynobiidae* | Existing population: Unknown | CR

Summary
This is an endemic species found only in parts of Kyoto, Hyogo, Fukui and Ishikawa prefectures. They live in areas such as marshes in forests.



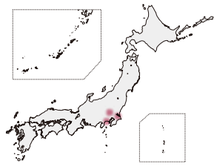
Reasons behind decline
- Loss of its habitats by development such as road and housing construction
- Illegal capture by collectors
- Predation by alien species such as racoons and red swamp crawfish
- Habitat destruction by wild boars

Summary of protection and recovery program
- Protecting habitats as "Natural Habitat Protection Areas"
- Maintenance of the habitat condition including removal of gravel and digging ditches

Tanakia tanago

Fish | Scientific name: *Tanakia tanago* | *Cypriniformes* *Cyprinidae* | Existing population: Approximately 1,000 | CR

Summary
The Tokyo bitterling (*Tanakia tanago*) is an endemic fish that lives only in parts of the Kanto Plain. It lives in ditches and ponds that have spring water as their source. It lays eggs on freshwater mussel.



Reasons behind decline
- Degradation of its habitats due to factors such as urbanization, river improvement and farmland consolidation
- Adverse effects of alien fish species
- Illegal fishing

Summary of protection and recovery program
- Removal of non-native species
- Stabilizing water quantity
- Removal of overgrown vegetation and gravel
- Breeding in captivity
- Reintroduction into the wild

Celastrina ogasawaraensis

Insect | Scientific name: *Celastrina ogasawaraensis* | *Lepidoptera* *Lycaenidae* | Existing population: Unknown | CR

Summary
This butterfly is an endemic species seen only in the Ogasawara Islands. Only a few have been confirmed on Hahajima Island.

Reasons behind decline
- Major threat: Predation by the green anole, an invasive alien species
- Concern: Damage to vegetation from large typhoons

Summary of protection and recovery program
- Establishing protective fences to prevent the invasion into the habitat on Hahajima
- Development of technology for artificial propagation

Polemonium kiushianum

Plant | Scientific name: *Polemonium kiushianum* | *Angiospermae* *Polemoniaceae* | Existing population: Approximately 2,000 | CR

Summary
This perennial plant is an endemic and found in the grasslands in Aso region. Many beautiful blue-purple flowers bloom from June to August.

Reasons behind decline
Reduction of optimal grassland habitat due to changes in agriculture.

Summary of protection and recovery program
- Maintenance of grasslands in two Natural Habitat Protection Areas
- Cutting down trees to restore grasslands

What we can do

There is something each and every one of us can do to protect endangered wildlife. We can support conservation activities in various ways such as from donating to foundations aiming endangered species protection to purchasing goods produced while protecting wildlife.
What is more, it is important to pay attention to the natural environment that surrounds you, and find what you can do for the conservation of the wildlife as a whole.

Drive carefully around the habitat of endangered species!

There are reports every year of traffic accidents involving endangered wildlife. Those animals involved are usually killed or injured too severely to return to the wild, even after treatment. For species that have become extremely rare, even a few missing from their habitat will become a grave threat to their survival. Always drive carefully and be aware of endangered animals crossing the road.

An Okinawa rail (*Gallirallus okinawae*) involved in a traffic accident

Keep pets for life!

Sometimes pets are abandoned in the wild and cause, as non-native species, a major impact on endangered wildlife. For instance, feral dogs and cats may prey on endangered species, or pass on contagious diseases to wildcats. It is our responsibility to raise pets for life.

A cat with a hunted Amami rabbit (*Pentalagus furnessi*)

01 Taketomi Furusato Donations

Supporters can donate through the tax system, earmarking to the conservation of natural environments including endangered species like the Iriomote cat (*Prionailurus bengalensis iriomotensis*).

Inquiries

Taketomi Town Tax Affairs Section
TEL: 0980-82-6191
[Webpage] http://taketomi-islands-furusato.com/outline.html

02 Aso Grassland Restoration Farmers Association

Some agricultural produce is grown with composted cut-grass fertilizer. Purchasing them encourage the efforts in the sustainable use and maintenance of the grasslands, which contributes to conserving endangered species.

Inquiries

Secretariat, Aso Grasslands Restoration Farmers Association
TEL: 0967-34-0254
[Webpage] http://www.aso-sougen.com/producer/

03 Tsushima Leopard Cat Rice

The Tsushima leopard cat (*Prionailurus bengalensis euptilurus*) preys on small animals such as rodents and frogs around rice paddies. The Sago Leopard Cat Rice Farming Society grows rice while enhancing the food source for the cats.

Inquiries

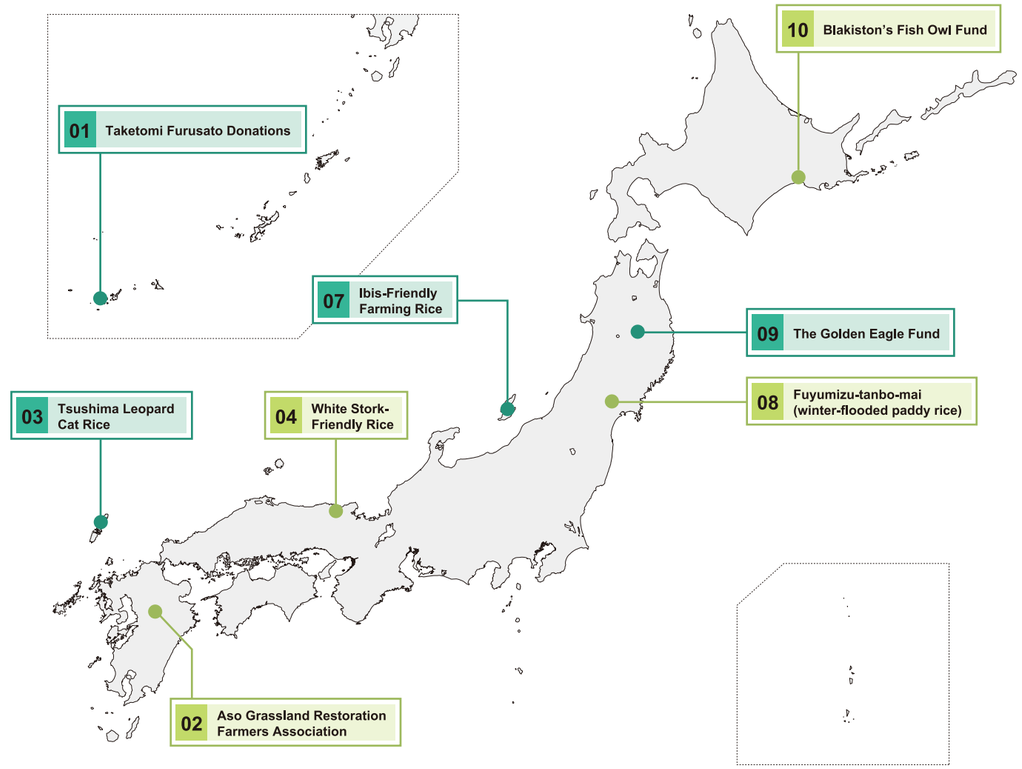
The Sago Leopard Cat Rice Farming Society
TEL: 0920-84-5286
[Webpage] http://www.yamanekomai.com/

04 White Stork-Friendly Rice

Toyooka City in Hyogo Prefecture implements organic rice farming methods to support the Oriental white stork (*Ciconia boyciana*) population reintroduced.

Inquiries

Division of Oriental White Stork and Human Co-existence, Toyooka City
TEL: 0796-23-1127
[Webpage] http://www.city.toyooka.lg.jp/hp/genre/agriculture/farming/rice.html



05 Keidanren Nature Conservation Fund

The fund supports both domestic and international wildlife conservation projects among others with donations from the private sector.

Inquiries

The Keidanren Nature Conservation Fund Office
TEL: 03-6741-0981
[Webpage] https://www.keidanren.or.jp/kncf/fund/index.html

06 Wildlife Protection Fund

JAZA call for donation through the zoos and aquariums belonging to the Association to conserve wildlife in Japan and overseas.

Inquiries

The Japanese Association of Zoos and Aquariums
TEL: 03-3837-0211
[Webpage] http://www.jaza.jp/wild_af.html

10 Blakiston's Fish Owl Fund

The fund is open for donations to promote conservation, research and awareness raising activities for Blakiston's fish owl, in cooperation with the Protection and Recovery Program by the Ministry of the Environment.

Inquiries

Japanese Society for Preservation of Birds, Kushiro Branch
TEL: 0154-65-2323

09 The Golden Eagle Fund

Part of the proceeds from products of the golden eagle supporter corporations are donated to the Fund and used for activities such as restoring forests.

Inquiries

Society on Regional Environment Planning in Touhoku
TEL: 019-601-2377
[Webpage] http://www.tokanken.jp/?page_id=49

08 Fuyumizu-tanbo-mai (winter-flooded paddy rice)

In the area around the Kabukuri-numa Marsh in Osaki City, Miyagi Prefecture, farms grow rice using the "Fuyumizu-tanbo" method, which floods the rice paddies during the winter season. This is done to protect the biodiversity of the rice paddies and the resting areas of geese.

Inquiries

Industrial Policy Division, Industry and Economy Bureau, Osaki City
TEL: 0229-23-2281
[Webpage] http://kabukuri-tambo.jp/about-rice/

07 Ibis-Friendly Farming Rice

In Sado City, Niigata Prefecture, rice is farmed in a way that creates more creatures for the ibises (*Nipponia nippon*) to feed on, to support their reintroduction. Additionally, some profit from the rice is used for conservation activities.

Inquiries

Biodiversity Promotion Office, Agriculture, Forestry and Fisheries Division, Sado City
TEL: 0259-63-5117
[Webpage] https://www.city.sado.niigata.jp/topics/gihas/info/rice.shtml

Red List/Red Data Book

There is a need to accurately understand the status of the species threatened to extinction and raise public awareness for wildlife conservation. For this reason, the Ministry of the Environment has established a series of lists of species threatened and make it available to public as the Red List. The Ministry also publishes a series of Red Data Books with information on the living conditions of the species listed on the Red List.

The Red List

The Red List provides a fundamental information compiled through scientific and objective evaluations by specialists. The List does not have any legal effects like prohibiting taking listed species, but is expected to be actively used in various situations as a wake-up call.

The Red List evaluation has been done mainly on terrestrial wildlife by classification—namely (1) Mammals (2) Birds (3) Reptiles (4) Amphibians (5) Brackish/Freshwater Fishes (6) Insects (7) Shellfish (8) other invertebrates (such as arachnids, crustaceans, etc.) for the fauna, and (9) Plants I (vascular plants) and (10) Plant II (non-vascular plants: bryophytes, algae, lichens, fungi) for the flora.

The latest complete revision of the Red List was released in 2012 as the fourth edition of the Red List.

From 2015, the category (rank) of species is reviewed as necessary, and the latest version of the partly amended list, the Red List 2017, includes 3,634 endangered species.

What is more, in 2017, the Ministry of the Environment has developed a new set of lists for marine species that had not been evaluated up to this point. The evaluation was done by classification: (1) Fishes (2) Corals (3) Crustaceans (4) Mollusks (cephalopoda) (5) Other invertebrates (annelids, brachiopods, etc.). The List has 56s endangered species.

[Ikimono-log URL] http://ikilog.biodic.go.jp/

Red Data Book 2014

Red Data Book

The Red Data Book is released approximately every ten years. It offers commentary on facts such as the reasons why the listed species are threatened to extinction. The current Red Data Book corresponds to the fourth edition of the Red List, and was published in 2014.

Summary of categories (ranks)

Extinct	EX	Species that are likely to already be extinct
Extinct in the Wild	EW	Species that exist only in captivity or as a naturalized population outside its natural habitat.
Endangered Class I	CR+EN	Species that are threatened to extinction
Endangered Class IA	CR	Species that are facing an extremely high risk of extinction in the wild in the near future
Endangered Class IB	EN	species that are faceing a high risk of extinction in the wild in the near future
Endangered Class II	VU	Species with an increasing risk of extinction
Near Threatened	NT	Species that are not currently endangered, but may possibly qualify for “endangered” status with changes in their habitat conditions
Data Deficient	DD	Species with data insufficient for adequate evaluation
Endangered Local Population	LP	Species with a population isolated regionally, and face a high risk of extinction

*Species in red are “Endangered species.”

Numbers of species listed in the Red List 2017 of the Ministry of the Environment

Taxon		Species targeted for evaluation	Extinct	Extinct in the Wild	Critically Endangered			Near Threatened	Data Deficient	Total of listed species	Endangered Local Population
					Endangered Class I		Endangered Class II				
					Class IA	Class IB					
			EX	EW	CR	EN	VU	NT	DD		LP
Fauna	Mammals	160 (160)	7 (7)	0 (0)	33 (33)	24 (24)	9 (9)	18 (18)	5 (5)	63 (63)	23 (23)
						12 (12)	12 (12)				
	Birds	Approximately 700 (Approximately 700)	13 (14)	1 (1)	97 (97)	54 (54)	43 (43)	21 (21)	19 (17)	151 (150)	2 (2)
						23 (23)	31 (31)				
	Reptiles	100 (98)	0 (0)	0 (0)	37 (36)	13 (13)	24 (23)	17 (17)	4 (3)	58 (56)	5 (5)
						4 (4)	9 (9)				
	Amphibians	76 (66)	0 (0)	0 (0)	28 (22)	15 (11)	13 (11)	22 (20)	1 (1)	51 (43)	0 (0)
						3 (1)	12 (10)				
	Brackish water/ freshwater fish	Approximately 400 (Approximately 400)	3 (3)	1 (1)	169 (167)	125 (123)	44 (44)	34 (34)	35 (33)	242 (238)	15 (15)
						71 (69)	54 (54)				
	Insects	Approximately 32,000 (Approximately 32,000)	4 (4)	0 (0)	358 (358)	173 (171)	185 (187)	352 (353)	153 (153)	867 (868)	2 (2)
						68 (65)	105 (106)				
	Shellfish	Approximately 3,200 (Approximately 3,200)	19 (19)	0 (0)	587 (563)	264 (244)	323 (319)	446 (451)	89 (93)	1141 (1126)	13 (13)
						13	7				
	Other invertebrates	Approximately 5,300 (Approximately 5,300)	0 (0)	1 (1)	63 (61)	21 (20)	42 (41)	42 (42)	42 (42)	148 (146)	0 (0)
						0	1				
	Subtotal of Fauna		46 (47)	3 (3)	1372 (1337)	689 (660)	683 (677)	952 (956)	348 (347)	2721 (2690)	60 (60)
Flora	Vascular plants	Approximately 7,000 (Approximately 7,000)	28 (32)	11 (10)	1782 (1779)	1041 (1038)	741 (741)	297 (297)	37 (37)	2155 (2155)	0 (0)
						522 (519)	519 (519)				
	Bryophytes	Approximately 1,800 (Approximately 1,800)	0 (0)	0 (0)	241 (241)	138 (138)	103 (103)	21 (21)	21 (21)	283 (283)	0 (0)
	Algae	Note 1 Approximately 3,000 (Approximately 3,000)	4 (4)	1 (1)	116 (116)	95 (95)	21 (21)	41 (41)	40 (40)	202 (202)	0 (0)
	Lichens	Approximately 1,600 (Approximately 1,600)	4 (4)	0 (0)	61 (61)	41 (41)	20 (20)	42 (42)	46 (46)	153 (153)	0 (0)
	Fungi	Note 1 Approximately 3,000 (Approximately 3,000)	26 (26)	1 (1)	62 (62)	39 (39)	23 (23)	21 (21)	50 (50)	160 (160)	0 (0)
	Subtotal of flora		62 (66)	13 (12)	2262 (2259)	1354 (1351)	908 (908)	422 (422)	194 (194)	2953 (2953)	0 (0)
Total of thirteen taxonomic groups			108 (113)	16 (15)	3634 (3596)	2043 (2011)	1591 (1585)	1374 (1378)	542 (541)	5674 (5643)	60 (60)

* Numerals within parentheses indicate the respective numbers of species (including subspecies, variety (only for flora) and form (only for algae and fungi)) from the third edition of the Red List (released in 2015).
The numbers in the LP column are the numbers of local population

* Some species in the categories of Shellfish and other invertebrates have been further categorized to subcategories of Class IA (CR) and Class IB (EN) from mere Class I.

Note 1: The number of species excluding those that cannot be evaluated by the naked eye.