GIAHS proposal

Globally Important Agricultural Heritage Systems (GIAHS) Initiative

SUMMARY INFORMATION

Name/Title of the Agricultural Heritage System:

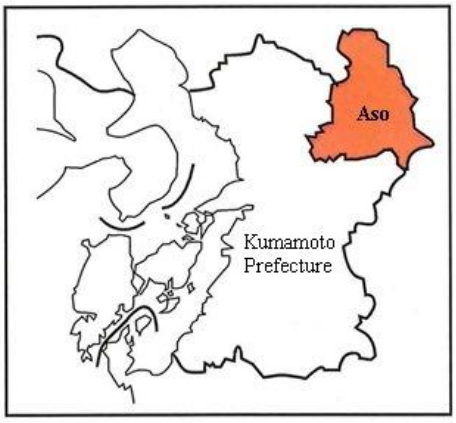
Managing Aso Grasslands for Sustainable Agriculture

Requesting Agency/Organization: Aso Regional Association for GIAHS Promotion (consist of Kumamoto prefecture and Local governments, farmers' cooperatives, tourism-industries associations etc. in Aso region)

Country/location/Site:

Aso region, Kumamoto Prefecture, Japan

Aso region is located on the center of Kyushu-Island, North-East of Kumamoto prefecture, which spreads around the huge caldera of an active volcano, Mt. Aso.



This region is made up of seven municipalities: Aso City, Oguni Town, Minami-Oguni Town, Ubuyama Village, Takamori Town, Minami-Aso Village and Nishihara Village. (See Annex 1)

Accessibility of the site to capital city or major cities:

1 h 30 min domestic flight transfer from Tokyo-Haneda Airport to Aso-Kumamoto Airport, from which 1 h connection to Aso Train Station by car.

Alternatively, 1 h from Kumamoto to Aso Train Station by JR Hohi Line (limited express).

Approximate Surface Area: 1,079 km^2

Agro-Ecological Zone/s:

Paddy and dry field farming, grassland and forest in temperate zone

Topographic features: Active volcano and its huge caldera

Climate Type: Temperate, cool

Approximate Population: 67,000 (5,700 farmers)

Main Source of Livelihoods: Agriculture, Forestry, Tourism

Ethnicity/Indigenous population: None in particular

Summary Information of the Agricultural Heritage System (about 200-300 words):

The Aso Grasslands are located in Aso region of Kumamoto Prefecture, which situates in the middle of the Kyushu Island in Japan. Aso region spreads around active volcanic craters and huge caldera. The Aso volcano has one of the world's largest caldera stretching 18 km from east to west and 25 km from north to south. This caldera area is designated as Aso-Kuju National Park and is also a part of the Japanese Geoparks Networks.

Even though the volcanic soil and geographic conditions are not suitable for cultivation, local people have, for generations, adapted themselves to this challenging environment. They have made improvements to the volcanic soil of the cold uplands and started cultivation by creating paddies and dry fields for farming, and also grasslands for pastures for grazing and mowing. Thus today, we have a variety of agriculture flourishing in this area, such as rice farming, outdoor vegetable horticulture, greenhouse horticulture, stockbreeding and so on.

The beautiful grasslands extending around the caldera were not only formed by natural disruptions such as eruptions and floods but also maintained by humans, whom have engaged in agricultural activities here for centuries; such as burning, grazing and mowing. These continuous agricultural activities have resulted in the vast "*semi-natural*" grasslands, and have promoted the spread of various kinds of rare grassland plants.

In utilizing the grasslands, the biodiversity and the rural landscapes of Aso have been preserved, and sustainable agriculture has been undertaken. In the current Aso region, 67,000 people live inside and outside the caldera, following the traditions of the local agriculture, farming methods, and rural culture.

These grasslands, managed by each community, are used for grazing cows and horses, and the grasses serve as their primary feed or the bedding for their stables. The composted manure is then used in the fields for paddy and dry field farming. The remarkable feature of Aso region lies in this dynamic system of sustainable agriculture through cyclical grassland use and its management system.

DESCRIPTION OF THE AGRICULTURE HERITAGE SYSTEM

Ⅰ. Characteristics of the proposed GIAHS

Global (or national) importance

(a) Geographical features and landscape

Photo1: Aso caldera (by M.Kishida)

Aso is the world's pre-eminent caldera area, which has the volcanoes extending around at its center. This area is designated, already in 1934, as National Park with landscape regulations, and is also as Japanese Geopark.

Its most distinctive landscape is a stretch of grasslands, which are formed and maintained through long-term agricultural activities by the local people, such as burning, grazing and mowing. Therefore, Aso's grasslands can be regarded as a 'secondary natural' environment. In addition, human economic activities developed in adapting to its different geographical conditions inside and outside of the caldera have formed broad landscape of grasslands, forests and farmlands. This magnificent spectacle attracts a great number of tourists from around the world (See Photo 1, 2).

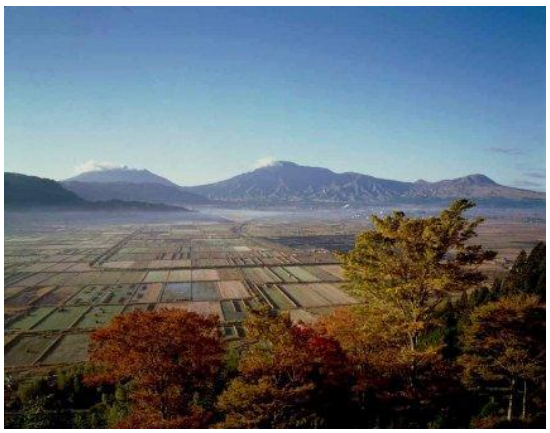


Photo2: Paddies and fields extending inside the caldera

(b) Agriculture utilizing grasslands

Farming adaption to the area's challenging geographical features and its volcanic soil which is basically unfit for agriculture, have continued here for centuries. Aso's grasslands are mentioned in the 10th century's official document as horse farms. The long-term burning, grazing and mowing brought about these particular landscapes which feature vast

semi-natural grasslands. Most of the grasslands in this region have been traditionally controlled by each community as their "common lands". The grasses were used in paddy farming, dry-field farming, as well as stockbreeding. Now they are mainly used for beef cattle production.

The remarkable feature of the agriculture system in the Aso region is the unique circulation of grass use through effective burning, grazing and mowing, which conserves the rare biodiversity and agricultural landscapes.

(c) Biodiversity maintained in semi-natural grasslands

Under the normal Japanese temperate and humid climate, grasslands tend naturally to transform to the broad-leaved forests if unmanaged. Here in Aso, however, the biggest semi-natural grasslands in Japan of 22,000 ha 1) are maintained, nurturing various rare species of grassland plants (See Photo 2).

There exist many distinctive plants which indicate that Kyushu Island was once connected to Eurasian continent, and also the butterflies which feed on these plants. Thus, this region is a veritable treasure house of flora and fauna.

The reasons why such plants have survived till today are that not only the natural effects of the micro-thermal climate and volcanic activities, but also the human's actions of agricultural activities on the grasslands, such as burning, grazing and mowing. It is considered that these human activities have prevented the natural transition, and have helped grassland plants to survive to this grassland environment.

(d) Traditional culture relating to agriculture

Local people have long regarded the active volcano, Mt. Aso, with reverence and from which the belief in the volcano related to the Aso Shrine till today is derived. The god of creation in Aso, *Takeiwa-tatsu-no-mikoto*, is worshiped as the major god at Aso Shrine, and has many mythological stories in this region. Various traditional rituals and festivals are held throughout the year in and around the Aso Shrine to pray to the gods based on myths about agricultural production where people would pray and give thanks for their harvests.

1. Food and livelihood security

a) Agriculture

Agriculture (including stockbreeding) is the major industry in the Aso region. The total annual agricultural output amounts to 29 billion yen; outputs of rice and vegetables each constitute about 6 billion yen (about 20%), and stock breeding about 13 billion (about 50%) 2). In addition to rice cultivation, various summer-autumn vegetables are grown in the cool climate on the plain farmland at the bottom of caldera, such as tomatoes, spinach, asparagus, radish, cabbage and strawberries, or flowers such as gentian and lisianthus.

Local employment rate to the primary sector industry is 20% 3), where the number of farmers in the Aso region who engage in agriculture as their main job amounts to 5,730 4) (2010 Agriculture and Forestry Census).

Agriculture in the Aso region has been continuingly adapting itself to the various geographical features of the caldera and to the acidic volcanic soil, which is unsuitable for agricultural production. Its highland cool climate and this soil with comparatively few nutrient elements resulted in low productivity. Harvests are often affected and suffered damages from natural disasters such as falling volcanic ash or floods. Despite such unfavorable conditions for farming, people have utilized the agricultural land for diverse production; the grasslands on outer rim of the caldera were for grazing and mowing and the plains on the bottom saw long-term improvement of farmland. Thus today we have bountiful of cereal crops such as rice or soya beans, vegetables, livestock breeding, etc.

Photo3 'Akaushi'

b) Stockbreeding

Among the sectors of agriculture, stockbreeding occupies eminently an important position; it constitutes almost 50% of total Aso's agriculture outputs. Compared to crop cultivation, stockbreeding in Aso has the advantage of making use of the vast grasslands and grass resources around.

Today, large-scale stock production is undertaken through utilizing the vast grasslands. In Aso region, many farmers engage in cultivation and stockbreeding at the same time, so half of them possess about only ten cattle or below 5). For these comparatively small farmers, grazing is more efficient than fed in cattle shed.

Photo 4 Cows grazing

Although the breed of cattle in Japan is mainly the Japanese black cattle, the Japanese red cattle (hereinafter referred to as *Akaushi*) are bred by the people in Aso region as their main breeding stock (See Photo 3). Most of cows grazing in the grassland are composed of *Akaushi* (See Photo 4).

The *Akaushi* also has a unique and delicious meat flavor and its good balance of lean and fat is popular with health conscious consumers.

c) Forestry

Forestry is also a major industry in the Aso region. The log production amounts to 82,325 m^3, and its output is about 2.3 billion yen 4, 6). Its complementary industry, mushroom cultivation, adds another 300 million yen to total annual output.

Most of the present forests in the caldera are artificial forests of conifers, such as cedar or cypress. They are planted on communities' grasslands for the purpose of the water catchment or for log production. This partial conversion from grasslands to forests which local people normally prevent shows the change of communities' needs on grassland.

Oguni Town and Minami-Oguni Town, located in northern rim of the caldera, has also a long history of forestation. In the 1750's, lord of Kumamoto province ordered a forestation of 25 cedars per each family, and today *Oguni*-cedar became one of the nationally famous brands. Besides *Oguni*-cedar, Aso region also produces good wood resources such as *Nango*-cypress. In addition to the timbers, the utilization as woody biomass is also promoted recently.

2. Biodiversity and ecosystem function

a) Semi-natural grasslands

Photo 5 Dry fields on the east outer rim of Aso (black soil)

The black soil of the Aso area is widely and thickly distributed. There are three factors which have contributed to this phenomenon: the grassland vegetation, the volcanic activities and burning by human (See Photo 5). The analyses of the silicic acid contained in the soil revealed that the bamboo grassed vegetation was 13,000 years ago replaced by that of silver grasses, which requires burning. This indicates that the existence of grasslands with human intervention dates back over 10

millennia 7).

According to certain research, 13% of the surface of Japan is said to be covered with grassland until the beginning of 20th century. Today, semi-natural grasslands are nationally decreasing to only 1% 8). Nonetheless, people in Aso continue to maintain the grasslands by burning, grazing and mowing repeatedly. As a result, Aso region makes up almost half of the grasslands in Japan today.

b) Treasure house of flora and fauna (See Annex 2 and 3)

The Aso area has many kinds of the remnant species of continental plants, the northern plants and *Sohayaki* elements, some of them are indigenous to this area (See Table 1).

Table 1: Classification of remnant plants in Aso region

Continental plants	Kyushu Island was once connected to continental China.
Northern plants	Southern limit of distribution is the Aso region.
Sohayaki elements	Kyushu used to be connected with mainland Honshu and Shikoku Islands. "*Sohayaki*" is coinage composed of abbreviation of three place name.

Photo 6 Grassland with many grassland plants

Many of these plants are adapting to the cool climate and the grassland environment, whereas it seems to have vanished from most parts of the Japanese Islands because of climate changes after the glacial age. However, they have survived in the Aso region owing not only to the effects of the cool highland and the volcanic activities, but also to human activity in the grasslands subsequently served to their survival (See Photo 6).

In the outer rim of the crater, there grows the largest scale of *Primula sieboldii* community in Japan. Additionally, many rare species thrive here: namely, the indigenous plants which grow only in Aso such as *Polemonium kiushianum, Trigonotis radicans, Geranium soboliferum var. kiusianum* and the continental relict plants such as *Viola orientalis, Silene sieboldii, Lilium concolor*, etc. In particular, the marsh in the northern outer rim and the grasslands around are good places for marshy vegetation specific to Aso (See Photo 7-9).

Photo7 Primula sieboldii

Photo8 Polemonium kiushianum

Photo9 Echinops setifer

In addition, many animals live in the grasslands and the marsh. The area is a unique ecosystem which hosts a plethora of butterflies such as *Shijimiaeoides divina asonis* which eat unique grassland plant named *Sophora flavescens* (See Photo 10) or *Maculinea teleius* that eats *Sanguisorba officinalis*, and also of migratory birds on grasslands such as *Emberiza yessoensis yessoensis*,*Gallinago hardwickii*

Photo10 *Shijimiaeoides divina asonis* and *Sophora flavescens*

Also, through grazing in the grasslands, the manure of cows and horses became fertilizer for the grasslands and food for some insects like *Phelotrupes laevistriatus* and *Phelotrupes auratus* which are in turn eaten by birds. This leads to an ecological food chain.

As described, the Aso region is one of the hot spots of biodiversity in Japan where endangered species are intensely concentrated.

c) Indigenous vegetables 9)

Adapting to the highland cool and rainy climate, there are various agricultural productions in Aso area. The main crop is rice, and various summer-autumn vegetables are grown (See Annex 4). In addition to these crops, this region is also bountiful with indigenous vegetables.

Photo12 'Akado-zuke'

The area produces *Aso-takana*, which is a special indigenous plant grown in the volcanic soils in the cold

Photo11 'Akadoimo'

upland climate. *Takana-zuke* is regarded as one of the three best-known pickles in Japan.

Akado-imo, a kind of taro potato, has red leaf, edible stems. *Akado-zuke* is its brined bunch with a distinctive texture and a fresh sour taste (See Photo 11 and 12).

Tsurunoko-imo, a kind of taro, limited in the area of Takamori Town, is only grown in volcanic and poor soils. It is served as a local specialty called *Dengaku* (*miso*-rubbed *Tsurunoko-imo* passed over a flame on a skewer).

And, *Kurona*, means black leaf, is a leafy vegetable produced in winter in the Takenoyu district of Oguni Town. It is cultivated in farm fields with high soil temperatures in the spring heat. It is steamed over the abundant hot springs of this area.

d) Water resource of northern Kyushu

The Aso region is a rainy district, experiencing annual rainfall of up to 3,200 mm 10). Because of the pervious volcanic soil and its varied vegetation - forest and vast grasslands which can absorb the water - much of the rain soaks under producing mineral-rich underground water. The region has an abundance of natural springs distributed widely because of such substantial amount of underground water.

Famous among them are Shirakawa Spring (60t/min) and Ikeyama Spring (30t/min) 11), both selected as one of the 100 best waters in Japan. Also, there is a natural spring zone and many flowing wells can be seen everywhere in Aso-dani (See Photo 13).

Photo13 Shirakawa Spring

Figure 1: Major Rivers flowing from Aso region
The Aso Grassland Restoration Report 2011
(Aso Grassland Restoration Committee)

The region also includes the water resource of many big rivers including the Shirakawa River (See Figure 1). Their total basin area is 9,000 km^3 with 2.3 million inhabitants 12),

thus Aso is also called “the water resource of northern Kyushu”. Many irrigation facilities in the Shirakawa area are utilized for agricultural production activities.

Also, about 1,000,000 residents of Kumamoto City and neighboring towns downstream enjoy an enviable quality of tap water; almost 100% are from groundwater at the western foot of the Aso area 11).

3.Knowledge systems and adapted technologies

a) Grassland and cultivation

The grasses have been utilized in various ways related to agriculture for longtime. Before, the grasslands were used as grazing for cows and horses for cultivation, or as mowing for feeding these animals. In addition, cows and horses plowed the farmlands, and the green manure or the composted manure was put onto the farmlands to fertilize the soils. The grasses were used also as bedding for the barns, as materials for house roofs or as fuels. Thus, the grasslands in Aso region were cyclically used closely connected to the cultivation (See Figure 2).

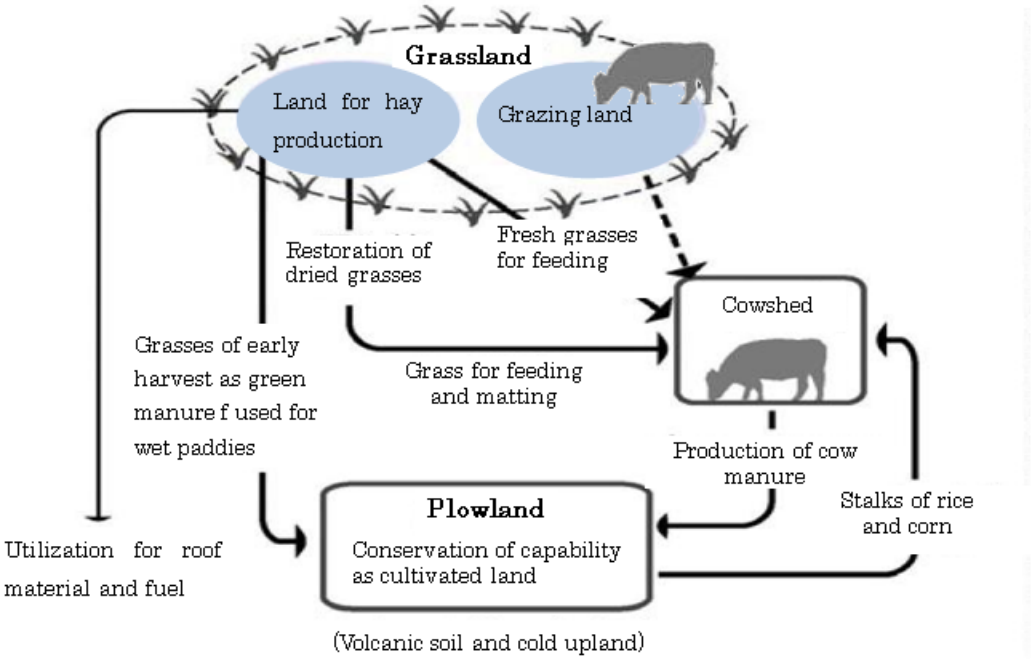


Figure 2: Relation between grassland and agriculture

The Aso Grassland Restoration Concept

(Aso Grassland Restoration Committee)

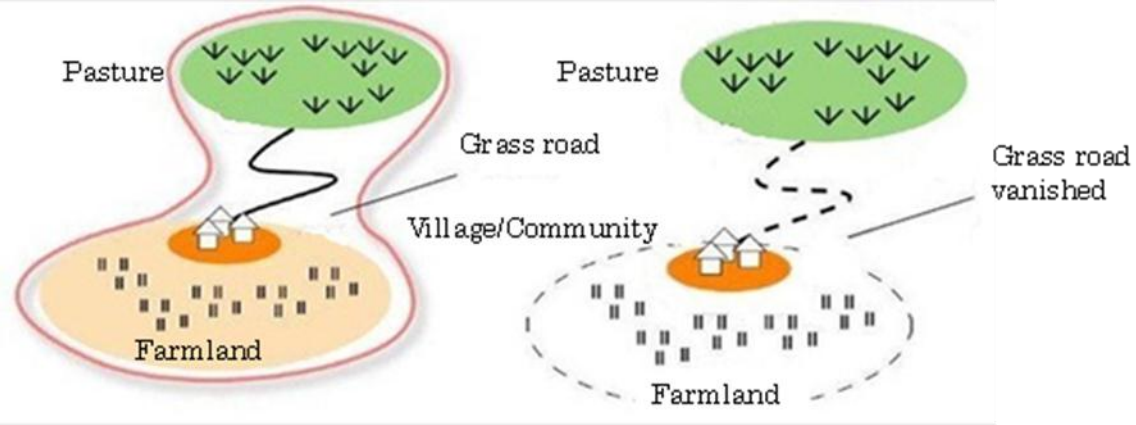
b) Recent adaptation:

Until 1950’s, each members of the communities who cultivated dry and paddy fields have

their farm cows or horses for cultivation. They have to secure the feed for their animals with the grasslands, managed by the communities as their common lands. This unit of grassland and community through cyclical use of grasses was spread all around the Aso region.

Owing to the popularization of farm machines, the use of animals in cultivation can no longer be seen. The grassland have lost its role as feed production, once used by almost all members of the community, and a popular path called “Grass road” is no longer used (See Figure 3). Today, cows or horses are not for plowing farmers, but mainly for the limited members of the community who engages in stockbreeding. Animal feeding and soil improvement with grasses is still continued.

Thus, due to social changes and the modernization of agriculture, the form of land utilization in Aso has been changing significantly. The physical relationship between communities and grasslands become comparatively obscure, and there can be discord between community members and grasslands users. The grasslands are utilized variously in adapting changing needs from agriculture and society it does shows the close relation with Aso’s agriculture and grasslands.



Until 1950’s : The relationship among [pasture - grass road - farmland] functioned.

After agricultural modernization: The relationship among [pasture - grass road – farmland] becomes obscure.

Figure 3 Basic relationships among villages, pastures and farm lands
Ref.: The Aso City Board of Education, the Report of Conservation Research for Cultural Landscape in Aso (secondary basic research), 2011

c) Management technique

(i) Burning

Photo14 Burning

The burning of grassland is carried out from late February to April. It prevents the growth of trees and the

spread of forests, and it exterminates destructive insects and helps new sprouts on their upward journey above ground (See Photo 14). Burning is an effective and power-saving way of managing the grasslands. Especially in Aso region, grasslands are vast, geographically complicated and steep, thus grazing and mowing are not enough to manage grassland.

Besides, *wachigiri*, the way of creating boundaries in grasslands by mowing, the toughest operation, is conducted from summer to autumn (See Figure 4). The mowed grass is being burnt for a few days and it becomes the firebreaks (See Photo 15). The total extension of *wachigiri* in Aso region amounts to 530 km (2011) 13).

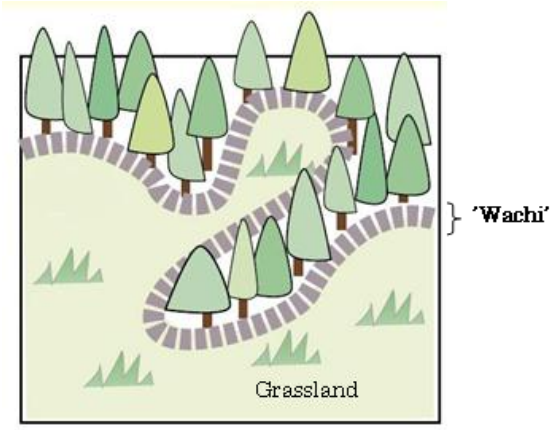


Figure 4 Image of 'Wachi'
The Aso Grassland Restoration Concept
(Aso Grassland Restoration Committee)

Photo15 'Wachigiri'
(by Aso Green Stock)

(ii) Grazing

The grazing is held from April when grasses begin to grow till November when frost forms. This grazing which is carried out consecutively from spring to autumn is called the "summer-hill winter-village" method. While the number of cattle in Aso decreases, communities are taking in cattle from another area in order to maintain the grasslands through utilization. In addition, area-crossing grazing, and year-around grazing including winter season, is also practiced these days for cost efficiency.

(iii) Mowing

The times and the places of mowing are decided according to the growth of grasses, the size of a farm family and the equality of their utilization of the grasslands. The strict regulations of the communities regarding when to start mowing and how to allocate the places of mowing have been carefully observed, bringing equal benefit to each family while averting

resource depletion at the same time.

In early autumn, hay production for the winter season is conducted. Up to about 50 years ago, the cutting of grasses was done by the whole community, and, especially in the northern rim, the local people stayed in temporary lodges made of silver grass for many days while this task was performed. Then, the grasses are dried in the sun for one or two days and piled up in what are called *kusakozumi* – literally, 'small heap'.

Burning itself seems to help only the dominant species (silver grass), and reduce the number of the remaining plant species and the insects or small animals that eat these plants. Therefore, mowing and hay production – that is, activities which do not include burning - would seem to help conserve biodiversity.

4. Cultures, value systems and social organizations (Agri-Culture)

a) Agricultural ritual and festivals

The Aso volcano is active and its eruptions can damage food crops. People have prayed to the volcano for good crop growth since ancient times. They worshiped the volcano as a god, and today we have many related agricultural ritual and festivals of Aso Shrine.

These rituals start from the *Tokanosechie* (a ceremony to sing the *tauta*, a rice planting song, in front of the chief Shinto priest of Aso shrine) on new year, to the *Tanomi* Ritual (a ceremony to give thanks for the rice harvest) in autumn. Seasonal rituals related to rice farming are held mainly by Aso Shrine and Kokuzo Shrine throughout the year. The purpose of these rituals is to wish for a good harvest and mitigate any damage from volcanic ash caused by eruptions of Aso. One can understand the importance of such rituals and cultural practices in people's daily life of this area in days bygone, and it has been designated as a National Important Intangible Folk Cultural Property.

The "*Hifuri* Shinto Ritual" (*hifuri* means to brandish torches) is held in March to celebrate the wedding of *Kunitatsunokami*, one of the twelve gods of Aso, to a princess, is well-known as a dynamic festival (See Photo 16).

Held in July, the *Otaue-jinkoshiki* is a festival during which the gods see how the rice is growing. Fourteen ladies called *unari* dressed in white clothes walk slowly around the

paddy fields from Aso Shrine, with meals offerings on their heads for each fourteen gods.

The *unari* are accompanied by cows on their walk (See Photo 17), showing that the animals have long been considered treasures in the Aso area. It shows a scene reminiscent of ancient custom.

Photo 16 Hifuri Shinto Ritual

Photo 17 Ondaue-jinkoshiki

The *Hitaki* Shinto Ritual, held from August to October, is to avoid damage on harvest by frost. A maiden stays in the place called "*Shimomiya (means frost shrine)*" alone and maintains a blazing fire for 60 days. It is said to be one of the most unique ritual in Japan.

b) Sustainable grassland use managed by local communities

Most of the grasslands in Aso are managed by cooperative units of communities as their "common lands". The unit members or the commonage holders in communities are able to access the designated mountains and forests in order to obtain the necessary materials for their production and living. There exists a specific right to manage and use the land cooperatively; such as only those who satisfy certain requirements can be members, or if a member moves out of their community, they must relinquish these given rights.

From ancient to modern times in the Aso region, grasslands have been maintained according to the social needs of the time. This resulted in the rules of grassland use in each community and a desire to avoid competition for resources. Such community regulations contributed to sustainable grassland use and such cooperation in management work more efficiently than individual operation. On the other hand, different from usual properties in other areas, this right over the grassland was never divided into individual possession in Aso region. Since this commonage right requires the consent of all members for selling the land, it helps to prevent hasty land development. This commonage system is the core value for village communities to manage regional resources cooperatively.

5. Remarkable landscapes, land and water resources management features

a) Landscape of grassland

Photo18 Aso-Gogaku from the grassland of the outer rim of the Aso crater

As a result of Aso's dynamic volcanic activity over the millennia, this area forms spectacular caldera landscapes. This area is designated as a National Park under landscape regulation, but many of the distinctive features of the vast grasslands are secondary natural landscapes created by human intervention. These actions have created a large scale landscape which now includes grasslands, forests and paddy fields (See Photo 18).

The bird's eye view of the grasslands shows some stripe patterns of contour lines. They are called "cow paths", which are made after cows walk and eat the grasses for a long time. Due to steep slopes, grazing for the maintenance of grasslands is indispensable in the Aso region.

b) Forestation and grassland

Most of the present forests in the caldera are artificial forests made by those who planted trees in the grasslands. Trees were planted at a rapid rate due to the rise in demand for wood due to post-World War II construction and in line with the national forestation policy. From around 1953, acicular trees like Japanese cedar and cypress began to be planted in the pastures and the vacant lots, where natural broad leaf trees were logged. By around 1965, the present landscape of forests had been formed 14). Most of the total forests of about 67,000 ha in Aso region 15) are plantations of acicular trees, and the remaining natural forests are very limited.

Photo 19 Landscape inside the caldera from the outer rim (from top to bottom: grasslands, forests, farm lands)

Another characteristic is the relationship between grasslands and forests. People started planting trees from near their own villages due to their convenience of work, in other words, from the bottom parts of the grasslands. This bottom-to-top order is a different transition from the natural order of top-to-bottom extension of forests, grasslands, farmlands and villages. This forms the distinctive landscape of the Aso region

(See Photo 19).

These forests contribute much not only to forestry production, but also to water catchment, grasslands conservation, and the preservation of the mountainous steep lands. For those who live in the Aso region, agriculture and forestry are closely related.

c) Rural landscapes through infrastructure construction

Since around 1980, public projects on rural infrastructure construction have been conducted for consolidation of the farmlands, upgrading the farm roads and the irrigation facilities for agriculture, mainly in the Aso-dani area (northern part inside the caldera). It brought about farmlands improvement, cost reduction, consolidation of farm lands, higher productivity and enlargement of management scale. Through these projects, total paddy fields reach 9,000 ha, and dry fields about 11,000 ha at present 16).

As a result of these infrastructure constructions, we can see orderly ranged rural landscape with vast paddies or dry fields. They also contribute for watershed protection and for habitats for various flora and fauna.

d) Land use inside and outside the Caldera

Inside the caldera, the communities at the foot of the mountains utilize the pastures of the highlands close to them. Since many of them manage their common lands, the pastures inside the caldera radiate around the Aso volcano.

In the other highlands outside the caldera, each village manages the pastures as its common land. In the eastern districts of the caldera lie the villages of Namino and Takamori, where, each community of villagers utilizes its own small pasture since each village is sparsely populated. The Villages of Oguni, Minami-Oguni, and Ubuyama on the north slope of the caldera, are mainly located on the scattered plains on the valley floors. In Nishihara Village on the west slope of the caldera, each community utilizes a relatively expansive pasture on the upper part of the slope 17) (See Annex 5).

Ⅱ. Other social and cultural characteristics pertinent to the management of the agricultural system

a) Volcanic belief and Aso Shrine

The Aso volcano is active and its eruptions can damage food crops (See Photo 20). People have prayed to the volcano for good crop growth since ancient times. They lived in fear of the volcano and worshiped it as a god. At the same time, it is the origin of their faith in the volcano god.

It is said that the beginning of Aso shrine dates back to 282 B.C. *Hayamika-tama-no-mikoto* built the original shrine to honor his parents. His father is *Tateiwa-tatsu-no-Mikoto,* the god of the fire-mountain, (See Photo 21). This shrine, which boasts a long and distinguished history, is dedicated to *Tateiwa-tatsu-no-Mikoto* as a major god and 12 other gods who created the Aso region. Kokuzo Shrine, 6 km north from Aso Shrine, is dedicated to the veneration of *Hayamika-tama-no-Mikoto*. These shrines are located on a straight line which includes the Takadake and the Nakadake peaks in the caldera.

This belief in volcano is deeply reflected in the annual agricultural rituals.

Photo20 Aso Naka-dake Crater

Photo 21 Main sanctuary of Aso Shrine

Ⅲ. Historic relevance

a) Early settlement of the Aso region by the Aso clan

Most Stone Age remains were distributed on the outer rim of the crater, and the flat land on the bottom of caldera wetland agriculture presumably began in the Yayoi Period (300 B.C. – 300 A.D.). The Ichinomiya area around the Aso Shrine is assumed to have been irrigated quite early and generating agricultural settlement. This area is thought to have been the political and cultural center of the Aso Region since then on. 18)

In the Middle Ages, the Aso Clan, originally oracle of Aso shrine, began to gain power not only in *shinto* rituals but also in regional governance. Under the manor system, the Aso clan largely developed farmland in Aso-dani, and it brought them economical accumulation

enough to dominate this region for longtime.

The development of Aso's grassland could be dated back to 905 A.D. where it is mentioned in the "*Engi-shiki*", a medieval book of laws and regulations. The expression "*maki*" also appeared in the mentioning which represents the existence of horse farms in the grasslands, and thus infers that cattle grazing were already conducted at that time. 19), 20)

b) Improvement of *Akaushi*

The origin of *Akaushi* is said the cattle came from Korea in the past, and then adapted and settled into the Aso region. *Akaushi* is generally strong in body, docile in character, and easy to take care of. They have also a high tolerance to cold, heat and poor food. These characteristics suit well for grazing on grassland in Aso region. *Akaushi* were popularly kept all around Aso region as working cattle. The present *Akaushi* is a hybrid of the native one and the Simmental from Switzerland. 21)

Grazing of cows is conducted from May when the plants start growing till the end of October when the first frosts appear. Many of the pasture cows are *Akaushi* for breeding. The scene of grazing *Akaushi* on the vast grassland is common and often featured in Aso tourism promotional media.

Ⅳ. Contemporary relevance

a) The protection of semi-natural grassland and its biodiversity

The biodiversity protected in the semi-natural environment is significantly important. Many rare plants survive till today intensively in Aso's grassland environment and cool climate in this indispensible grassland.

Once occupying 13% of the surface of Japan, the grasslands today cover only 1%. In the context of nationally disappearing of grasslands due to the changes of society, Aso's grasslands are protected through human agricultural activities and have then maintained unique landscapes. A place which developed and maintained an indigenous culture largely based on grasses for so long in one same location like Aso could be considered as one of the rare examples in the world.

b) Realizing a low carbon society

The black soil of Aso contains a wealth of humus provided by plants like silver grass. It contains a high amount of carbon, so this black soil serves the carbon trapping function. Burning of the grasslands every year provides more carbon to the soil. The silver glass has a good deal of roots, which also provide in the soil more carbon. Furthermore, one survey shows that black soil in wildflower fields may have a higher carbon absorption rate rather than in tree plantations. The possible amount of carbon absorption in Aso's grasslands per year is estimated at 4,817t in CO2, which is equivalent to 70% of the carbon dioxide emitted from all households in Aso.22) Thus, the potential of the grasslands in carbon absorption can contribute to mitigate carbon dioxide emission. The grasslands can have an important role as like the forests.

In addition, grasses can be an advantageous biomass resource in biodiversity. In Aso City, pilot tests are being carried out to establish an eco-friendly biomass energy system. The Biomass Operator Corporation was established to conduct grass harvesting, collection and transportation for grass sales. This system can stabilize the emission of carbon dioxide.

c) Transmission of traditional culture

As mentioned above, Aso's traditional rituals are assumed to be derived from ancient rice farming. From then on, people's rural life with the awesome volcano and the rice farming, connected with grasslands and domestic animals, has remained unchanged significantly. In this point, the conservation of grassland can be regarded as to help transmit relic of ancestor's composition including various rituals till present society.

Ⅴ. Threats and challenges

a) Threats

Although the grasslands are indispensible to maintain Aso's agriculture, its rare biodiversity and landscape etc, the maintenance of these grasslands through agricultural ordinary activities faces severe difficulties. The 2010 census reported there are 5,730 people whose major engagement is farming, where farmers more than 65 years old represent 52% of this total. 4)

The Aso region has grassland area of some 22,000 hectares for grazing. However, the way of agriculture has changed due to the mechanization, diffusion of chemical fertilizers, and decrease in use of thatched roofing. Plowing farmers no longer need to use animals for

cultivation, and grassland use is limited mainly to the stockbreeders within the community. In addition, the overall aging of the farming community, shortage of newcomers and free import of beef led to a decrease in the number of stockbreeding farmers. These factors have resulted in dwindling numbers of grazing cattle as well as of members joining pasturage cooperatives. The decrease of grassland use for cattle-grazing inevitably resulted in poor maintenance and devastation of grasslands (See Figure 5).

○ Meiji/Taisho Era (100 %)
(about 140 -80 years ago)
Whole area of Mt. Aso is grassland except Nakadake central volcanic cone and Nekodake
Grassland extends to outside of the outer rim

○ The 20'of Showa Era (79.5 %)
(about 60 – 70 years ago)
Grassland around Mt. Aso gradually became woodland in Hakusui village, the south side of Choyo village, volcanic crater area, and top of Nekodake and Takadake
The north side and west side of the outer rim didn't change, but grassland in the south side drastically decreased.

○ Present (52.8 %)
Grassland of Mt. Aso has decreased more and currently grassland remains within 1 km -4 km radius of volcanic crater having some spots of woodland.

Figure 5: Transition of Aso's grasslands use
(Ref: 'A survey on natural landscape management scheme in farmland,' The National Park Association Japan, 1995)

A survey conducted by Kumamoto Prefecture says more than half of the 160 pasturage cooperatives experienced difficulties in continuing their own grassland-burning in the past 10 years, mainly due to the shortage of local participants and tough work for aged people. 23)

The increase of poorly maintained grasslands stimulates the invasion of low bushes like brambles. This will lead to increased difficulty in grassland use, damage to rare flora and fauna, and resulting in plant monoculture, and loss of biodiversity.

In addition, the increase in poorly maintained grassland and tree plantations can lead to

collapse of hillsides. Eventually, it is likely to bring unfavorable effects to water resources originating in Aso and people's lives in the downstream areas. The Aso grasslands are not only a resource to agriculture but also an important attraction of the local tourism. Thus, any loss of grasslands would cause serious concerns in various areas.

b) Challenges

As described above, although the grasslands compose the core value and are indispensible to maintain Aso's agriculture, rare biodiversity and landscape etc. which are closely connected, the maintenance of these grasslands through ordinary agricultural activities faces several difficulties.

The most important is to promote the use of grasslands in ordinary agricultural context, such as grazing and mowing. The increase of numbers of cattle for grazing, especially *Akaushi* that is rather adaptable for grazing in Aso's grasslands, will contribute directly to the cyclical use of grasslands. On the other hand, the varied use of grass resource should be encouraged; composting with grasses can add market value to the vegetables grown with them for consumers. Grass use for biomass resource contributes to an eco-friendly biomass energy system and low-carbon society.

The second is to help local communities' management itself. As a survey shows, most pasture cooperatives have difficulties to continue the management of their own grassland in the long run. In order for the continued management of grasslands, a survey gathering the traditional knowledge and advices from each communities will be useful. Also, the introduction and expansion of volunteer schemes could help provide solutions to the lack of necessary manpower.

Last but not least, promoting citizen's participation in all these activities, including environment education for future generation can help to contribute to the maintenance of the grasslands.

Ⅵ. Practical considerations

a) Ongoing efforts to promote GIAHS

i) Promotion of cattle raising

Kumamoto Prefecture provides support to pasture cooperatives or prospective

cooperatives in cattle-grazing, such as purchase of necessary materials, and providing subsidies to introduce *Akaushi*. Also, it coordinates with less active pasture cooperatives to allow and promote grassland use for the public.

Aiming for higher profile of *Akaushi* with the hotels, inns and restaurants, Kumamoto Prefecture instituted the "Certification system of *Akaushi* cuisine" in which 50 stores were officially certified in March 2012.

In addition, the "*Akaushi* ownership system" has been also established by Aso Green Stock. All citizens can help to protect the Aso grassland through being owners of *Akaushi* by investing it. They will enjoy in return *Akaushi* beef delivered to them at regular intervals for over a five-year period. This is in line with the objective where "Eating *Akaushi* beef supports conservation of the Aso grassland."

ii) Agriculture under application of grass composts

Most farmers commonly use grass composting for cultivation of rice and vegetables. Grass composting on the grassland contributes to not only the restoration of grassland, but also the improvement of soil quality through the diversification of microorganisms, and through providing gradual nourishment.

Figure 6 Aso Grassland Restoration Label

For example, a gathering of producers called "The Circle of Grassland Restoration Label Producers", founded in 2005, is campaigning for the sustainable use of wild grass, multi-use of wild grass for reclamation of grassland, and cultivation of agri-products using wild grass.

Agricultural products which bear "The Aso Grassland Restoration Label" are on sale in local shops to promote awareness of grassland protection (See Figure 6).

iii) Volunteer activities conducted by the "Aso Green Stock" incorporated foundation

Aso Green Stock organizes volunteers for burning grasslands, mainly from Kyushu Island and nationwide. Volunteers must have training for grass burning and mowing, and are sent to pasturage cooperatives which have difficulties in continuing grass burning themselves because of aging and worker shortages.


Photo 22: Grass burning support volunteers (by Aso Green Stock)

This is a unique and prospective activity to protect grassland under the collaboration with urban areas, villages, and administrative authority (See Photo 22). The participation of the volunteers is highly appreciated by local people.

Volunteer activities for grass burning support began in 1999, in 7 zones with 110 volunteers. Now, more than 2,300 volunteers were sent to 49 pasturage cooperatives (2011). Nonetheless, there is still the need to increase of younger participants and to train volunteer leaders 24).

iv) Preservation of rare wildlife

Ministry of Environment designated *Polemonium kiushianum* as a domestic rare wildlife species in 1998, based on the Act on Conservation of Endangered Species of Wild Fauna and Flora, and protected it through the protection and multiplication plan. This species is prohibited from selling without authorization. Inside the special area of the Aso-Kuju National Park, rare species designated are forbidden to pick away.

In 1991, Kumamoto Prefecture instituted the "Regulation to Preserve Rare Wildlife", under which 26 endangered species were designated as 'specified rare wildlife', of which capture and extraction are prohibited. In 2004, the regulation was revised to strengthen the penalty system for violation, and 40 additional specified rare species and 15 wildlife reserves were designated 25). Also, the "Red Data Book of Kumamoto" was issued by prefecture to provide the basic information on wildlife preservation and collaborative activities with administration and local residents.

Furthermore, in 2006, Aso City instituted the "Regulation of Preserving Wildlife in Aso City", designating 11 types of vegetation and 1 animal as species in need of protection, and 4 areas as wildlife reserves. In 2005, Minami-Aso Village also instituted the "Regulation of Conserving Wildlife of Minami-Aso Village", designating 2 areas as wildlife reserves.

Poaching prevention of rare wildlife and patrols by guards are conducted throughout the year.

v) Grassland protection and restoration project by several players

i. Local councils or committees

"The Council of Aso Grassland Restoration" consists of 168 groups or companies and 54 individuals (Sep. 2011). This council aims at promoting actions toward the restoration of the

Aso grassland. Local farmers, academics, and administrative authorities collaborate closely to strengthen the restoration activity, and redacted in 2007 "the framework of Aso grassland restoration" to inspire younger generations.

In addition, "The Millennium Committee for Aso Grassland Restoration" was instituted in 2010 by business leaders, administrative authorities and academics. This committee aims to collect donations of 100 million yen within 3 years. The donations will be used for the introduction of *Akaushi*, grasslands burning supports, volunteer management by "Aso Green Stock", and activities to conserve biodiversity.

ii. Kumamoto prefecture

Besides the stockbreeding promotion activities for grassland restoration, Kumamoto Prefecture launched a project called "The *Kabashima* Initiative" to support the traditional framework for maintaining grasslands. It includes activities such as enhancing public awareness of the Aso grasslands and *Akaushi*, strengthening safety measures of grassland burning, and promoting CSR activities to collect contributions. The Aso Design Center, a incorporated foundation with prefecture and municipalities established for general regional promotion in Aso, has add maintenance and preservation of grassland as its new major mission.

iii. NPO

There were once fields full of blooming flowers called "*hanano*" in the Aso region in autumn. In order to restore *hanano* and conserve Aso's precious wildlife and plant life, abandoned grasslands which nurse rare plant life are trusted to a non-profit organization, through which grass burning and gathering are conducted.

Gathered grasses are purchased by local farmers, and utilized as farmyard manure. Academic institutions research their vegetation and collect scientific data. All these efforts can lead to enhancing public awareness toward the importance of the trust campaign.

b) Potentials and opportunities for sustainability and management of GIAHS

i) New standard for *Akaushi*

In comparison to the number of Black Cattle in Japan which amounts to 1.8 million, domestic red cattle (*Akaushi*) as livestock is very low at 25 thousand. 26) However, *Akaushi* in Aso numbers about 9,500, representing 40% of all domestic red cattle in Japan.

In 2011, an incorporated foundation named "The National Association of Domestic Red Cattle" was established aiming to promote the status of red cattle with nationwide producers. Under the conviction that nurturing healthy cattle brings good meats, their original criteria for meat evaluation is based not only on meat quality, but also on the way the cattle are raised. 27)

ii) Survey of each pasture cooperative

With the support from Ministry of the Environment, some pasturage cooperatives conduct surveys on grassland plants and the situations of the areas. Based on this survey, an action plan will be formulated to present a diagnosis and a roadmap which indicates how they have to deal with its own difficulties and to reform the management of grasslands, or to promote eco-friendly grassland use.

iii) Campaigns to boost awareness toward grassland

About 17 million of visitors come to Aso every year28), representing around one third of all tourists to Kumamoto Prefecture. Aso is a major tourism spot on Kyushu Island. In "The Aso Design Center", visitors can study the nature and cultural landscapes of Aso which have been nurtured through traditional agriculture. Besides this "Aso caldera tourism," it advocates 'eco-tourism' for conserving historical culture and nature, and 'green-tourism' which promotes communication with people in agricultural communities to deepen visitors' understanding of rural life and culture.

iv) Environmental study

The Aso grassland provides a fascinating theater for various fields of environmental study: global plate tectonics, volcanic activities, biology of flora and fauna, and human lifestyles.

"The Council of Aso Grassland Restoration" established in their agenda that local children should study the history and value of the Aso grassland. The campaign called "Aso Grassland Kids Project" is underway for the promotion of grassland environmental study. 29)

Furthermore, the "Aso Green Stock" incorporated foundation accepts school study-tours to advance students' understanding of the Aso grassland by studying the relationships between the grassland and the local people's lives and by experiencing the care of red cattle.

Also, five land improvement associations in Aso region are eager to contribute for resources management activities, including educational surveys on rural waters or creatures

for children.

c) Expected impacts of GIAHS on society and ecology

i) A higher profile for Aso in the world is widely expected to create the promotion of agriculture and tourism under close collaboration with both industries.

ii) The recognition of the agricultural landscapes of the Aso region as world class can stimulate and nurture the regional interest to protect the Aso grassland which is currently suffering from a lack of maintenance.

iii) Registering as a GIAHS can add momentum toward acknowledgement of the area as a World Cultural Heritage Site and a World Geo Park.

iv) The enhancement of value-adding in regional agricultural products is expected through the certification system.

d) Motivation of the local community, the local/national authorities and other relevant stakeholders

i) Local communities

An association consist of prefecture, local municipalities and related organizations was founded in September 2012, aim to enhance public awareness, and to get impetus by GIAHS for developing agriculture and economy, sustainability and biodiversity in Aso region.

An Italian restaurant chef, who has in advance advocated this GIAHS project, organized a civil meeting to appreciate and to encouraging local actions and local vegetables in this context.

ii) Local and National Governments

The Kumamoto prefecture published the local promotion strategy through grassland restoration and its utilization, named "*Kabashima* initiative (2012)". The prefecture's agricultural policy in this initiative cooperates with tourism, environment, industry policy etc. for the promotion of Aso region.

Ministries develop the policies on agriculture encouraging and conservation of biodiversity, based on the cabinet decisions, such as "the Basic plan for Food, Agriculture and Rural areas (2010)" and "the National Strategy for Biodiversity 2012-2020 (2012)."

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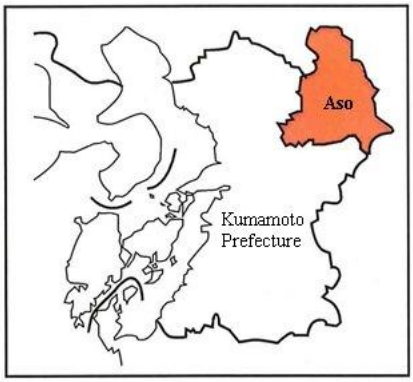
Annex 1: Location map of the system/site



Annex 2: Environment's Red List 2012

＊：Aso's endemic species ranging only in this region in Japan

Threatened ⅠA(CR)	Threatened ⅠB(EN)	Threatened Ⅱ(VU)		Semi-threatened (NT)
Polemonium kiushianum ＊	*Aconitum ciliare*	*Thalictrum simplex var. brevipes*	*Pseudolysimachion kiusianum* ＊	*Adonis multiflora*
	Dontostemon dentatus	*Lychnis kiusiana*	*Veronicastrum sibiricum var. zuccarinii* ＊	*Penthorum chinense*
	Lysimachia leucantha	*Lychnis sieboldii* ＊		*Primula sieboldii*
	Lithospermum erythrorhizon	*Pulsatilla cernua*	*Codonopsis ussuriensis*	*Swertia pseudochinensis*
	Trigonotis nakaii ＊	*Paeonia obovata*	*Platycodon grandiflorum*	*Cynanchum paniculatum*
	Euphrasia multifolia	*Hypericum ascyron var. longistylum*	*Artemisia rubripes*	*Utricularia uliginosa*
	Campanula glomerata var. dahurica ＊	*Lespedeza tomentosa*	*Aster maackii* ＊	*Achillea alpina ssp. subcartilaginea*
	Senecio flammeus ＊	*Geranium soboliferum var. kiusianum* ＊	*Aster tataricus*	
	Asparagus oligoclonos ＊	*Osbeckia chinensis*	*Echinops setifer*	*Artemisia stolonifera*
	Lilium callosum	*Bupleurum scorzoneraefolium var. stenophyllum*	*Inula linariaefolia*	*Carex kujuzana*
	Carex latisquamea		*Ixeris chinensis ssp. strigosa*	*Calanthe discolor*
	Habenaria dentata	*Pterygopleurum neurophyllum*	*Leucanthemella lineare*	*Habenaria radiata*
	Liparis odorata	*Lysimachia barystachys*	*Ligularia fischeri var. takeyukii* ＊	*Pogonia japonica*
	Saussurea japonica	*Mitrasacme indica*	*Saussurea pulchella*	*Lilium callosum*
	Herminium lanceum	*Trigonotis radicans* ＊	*Iris rossii*	*Scrophularia buergeriana*
		Cynanchum amplexicaule	*Arisaema heterophyllum*	
		Cynanchum atratum	*Fimbristylis tashiroana*	
		Ajuga ciliata var. villosior	*Schoenoplectus gemmifer*	
		Leonurus macranthus	*Habenaria sagittifera*	
		Centranthera cochinchinensis ssp. lutea		

ANNEX 3

List of Biodiversity（生物多様性のリスト）

EX:Extinct EW:Extinct in the wild CR:Critically endangered EN:Endangered VU:Vulnerable NT:Near Threated
DD:Data Deficient CS:Careful Species
EX:絶滅 EW:野生絶滅 CR:絶滅危惧ⅠA類 EN:絶滅危惧ⅠB類 VU:絶滅危惧Ⅱ類 NT:準絶滅危惧 DD:データ不足

Class 分類	Family 科		Scientific Name 学名	Name 和名	Category カテゴリー	
					Kumamoto 熊本県RDB	Japan 環境省RDB
鳥類 Aves	Ardeidae	サギ	*Egretta eulophotes (Swinhoe,1860)*	カラシラサギ	DD	NT
			Egretta intermedia intermedia (Wagler,1829)	チュウサギ	NT	NT
			Gorsachius goisagi (Temminck,1835)	ミゾゴイ	EN	VU
			Ixobrychus sinensis sinensis (Gmelin,1789)	ヨシゴイ	EN	NT
	Threskiornithidae	トキ	*Platalea minor Temminck & Schlegel,1849*	クロツラヘラサギ	EN	EN
	Anatidae	カモ	*Anas formosa Georgi,1775*	トモエガモ	NT	VU
	Accipitridae	タカ	*Accipiter gentilis fujiyamae (Swann & Hartert,1923)*	オオタカ	NT	NT
			Accipitergularisgularis (Temminck& Schlegel,1844)	ツミ	DD	
			Aquila chrysaetos japonica Severtzov,1888	イヌワシ	CR	EN
			Butastur indicus (Gmelin,1788)	サシバ	VU	VU
			Buteo buteo japonicus Temminck & Schlegel,1844	ノスリ	LP	
			Circus spilonotus spilonotus Kaup,1847	チュウヒ	EN	EN
			Pernis apivorus orientalis Taczanowski,1891	ハチクマ	VU	NT
			Spizaetus nipalensis orientalis Temminck & Schlegel,1844	クマタカ	VU	EN
	Rallidae	クイナ	*Porzanafuscaerythrothorax (Temminck& Schlegel,1849)*	ヒクイナ	NT	NT
	Scolopacidae	シギ	*Gallinago hardwickii (Gray,1831)*	オオジシギ	VU	NT
			Gallinagosolitariajaponica (Bonaparte,1856)	アオシギ	DD	
	Strigidae	フクロウ	*Asioflammeusflammeus(Pontoppidan,1763)*	コミミズク	NT	
			Ninox scutulata japonica (Temminck & Schlegel,1845)	アオバズク	VU	
			Otus lempiji semitorques Temminck & Schlegel,1844	オオコノハズク	DD	
			Otus scops japonicus Temminck & Schlegel,1844	コノハズク	VU	
			Strix uralensis fuscescens Temminck & Schlegel,1847	キュウシュウフクロウ	VU	
	Caprimulgidae	ヨタカ	*Caprimulgus indicus jotaka Temminck & Schlegel,1844*	ヨタカ	EN	NT
	Coraciidae	ブッポウソウ	*Eurystomus orientalis calonyx Sharpe,1890*	ブッポウソウ	EN	EN
	Pittidae	ヤイロチョウ	*Pitta brachyura nympha Temminck & Schlegel,1850*	ヤイロチョウ	EN	EN
	Campephagidae	サンショウクイ	*Pericrocotus divaricatus divaricatus (Raffles,1822)*	サンショウクイ	VU	VU
	Laniidae	モズ	*Lanius cristatus lucionensis Linnaeus,1766*	シマアカモズ	CS	
	Muscicapidae	ヒタキ	*Ficedula narcissina narcissina (Temminck,1835)*	キビタキ	CS	
			Muscicapa dauurica dauurica Pallas,1811	コサメビタキ	VU	
	Monarchidae	カササギヒタキ	*Terpsiphone atrocaudata atrocaudata (Eyton,1839)*	サンコウチョウ	CS	
	Emberizidae	ホオジロ	*Emberizafucatafucata Pallas,1776*	ホオアカ	LP	
			Emberiza yessoensis yessoensis (Swinhoe,1874)	コジュリン	CR	VU
	Corvidae	カラス	*Nucifraga caryocatactes japonica Hartert,1897*	ホシガラス	DD	
	Fringillidae	アトリ	*Eophona migratoria migratoria Hartert,1903*	コイカル	CS	
	Cettiidae	ウグイス	*Acrocephalusbistrigicep bistrigiceps Swinhoe,1860*	コヨシキリ	VU	
			Phylloscopus borealis xanthodryas (Swinhoe,1863)	メボソムシクイ	VU	
	Cuculidae	カッコウ	*Cuculus canorus telephonusHeine,1863*	カッコウ	CS	
	Alcedinidae	カワセミ	*Halcyon coromanda major (Temminck & Schlegel,1848)*	アカショウビン	EN	
	Phasianidae	キジ	*Coturnixjaponica (Temminck& Schlegel,1849)*	ウズラ	DD	VU
			Syrmaticussoemmerringii soemmerringii(Temminck,1830)	アカヤマドリ	NT	NT
	Motacillidae	セキレイ	*Anthus hodgsoni hodgsoni Richmond,1907*	ビンズイ	LP	
	Rostratulidae	タマシギ	*Rostratula benghalensis benghalensis (Linnaeus,1758)*	タマシギ	NT	VU
	Charadriidae	チドリ	*Vanellus cinereus (Blyth,1842)*	ケリ	CS	DD
	Turdidae	ツグミ	*Erithacus akahige akahige (Temminck,1835)*	コマドリ	EN	
			Turdus cardis Temminck,1831	クロツグミ	EN	
	Hirundinidae	ツバメ	*Hirundodauricajaponica Temminck& Schlegel,1844*	コシアカツバメ	VU	
	Gruidae	ツル	*Grus vipio Pallas,1811*	マナヅル	VU	VU
	Falconidae	ハヤブサ	*Falco peregrinus japonensis Gmelin,1788*	ハヤブサ	CS	VU
昆虫類 Insect	Coenagrionidae	イトトンボ	*Ceriagrion nipponicum*	ベニイトトンボ	NT	NT
			Ceriagrionmelanurum	キイトトンボ	NT	
			Cercionsiebold	オオイトトンボ	CS	
	Platycnemididae	モノサシトンボ	*Platycnemis foliacea sasakii*	グンバイトンボ	EN	NT
		ムカシヤンマ	*Tanypteryx pryeri*	ムカシヤンマ	VU	
	Calopterygidae	カワトンボ	*Calopteryx japonica*	アオハダトンボ	NT	NT
			Mnais nawai	オオカワトンボ	NT	
	Gomphidae	サナエトンボ	*Asiagomphus pryeri*	キイロサナエ	VU	NT
			Nihonogomphus viridis	アオサナエ	NT	
			Trigomphus citimus	タベサナエ	NT	NT
	Epophthalmiinae	エゾトンボ	*Somatochlora clavata*	ハネビロエゾトンボ	EN	VU
			Somatochlora viridiaenea	エゾトンボ	CR	
	Libellulidae	トンボ	*Nannophya pygmaea*	ハッチョウトンボ	VU	
	Epiophlebiidae	ムカシトンボ	*Epiophlebiasuperste*	ムカシトンボ	CS	
	Megapodagrionidae	ヤマイトトンボ	*Rhipidolestes aculeatus yakusimensis*	ヤクシマトゲオトンボ	CS	
	Trigonidiidae	ヒバリモドキ	*Pteronemobius yezoensis*	エゾスズ	DD	
			Trigonidium cicindeloides	クロヒバリモドキ	DD	
	Belostomatidae	コオイムシ	*Diplonychus japonicus*	コオイムシ	NT	NT
			Lethocerus deyrollei	タガメ	CR	VU
	Cicincelidae	ハンミョウ	*Cicindela gemmata aino*	アイヌハンミョウ	NT	NT
			Cylindera gracilis	ホソハンミョウ	DD	VU
	Rhaphidophoridae	カマドウマ	*Anoplophilus spp.*	クチキウマ属spp.（九州脊梁山地産）	VU	
			Neotachycinesasoens	アソキマダラウマ	NT	
	Meconematidae	ササキリモドキ	*Leptoteratura albicornis*	ヒメツユムシ	DD	

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					Kumamoto 熊本県RDB	Japan 環境省RDB
			Nipponomeconema musashiense	ムサシセモンササキリモドキ	VU	
			Tettigoniopsis kurodakensis	クロダケササキリモドキ	VU	
	Carabidae	オサムシ	*Calosoma maximowiczi*	クロカタビロオサムシ	NT	
			Carabus tuberculosus	セアカオサムシ	VU	NT
	Haliplidae	コガシラミズムシ	*Haliplus eximius*	キイロコガシラミズムシ	CR	VU
			Haliplus japonicus	チビコガシラミズムシ	CR	
			Haliplus sharpi	マダラコガシラミズムシ	CR	VU
	Dytiscidea	ゲンゴロウ	*Agabus browni*	チャイロマメゲンゴロウ	VU	
			Copelatus zimmermanni	チンメルマンセスジゲンゴロウ	CR	
			Copelatus weymarni	ホソセスジゲンゴロウ	NT	
			Cybister brevis	クロゲンゴロウ	EN	NT
			Cybister japonicus	オオゲンゴロウ	CR	
			Cybister tripunctatus orientalis	コガタノゲンゴロウ	CR	VU
			Graphodes adamsii	マルガタゲンゴロウ	CR	VU
			Hydaticus bowringi	シマゲンゴロウ	VU	NT
			Laccophilus kobensis	コウベツブゲンゴロウ	VU	NT
			Platambus nakanei	クロマメゲンゴロウ	EN	
			Platambus insolitus	コクロマメゲンゴロウ	CR	
			Platambus sawadai	サワダマメゲンゴロウ	EN	
			Sandracottus hunteri	オオマダラゲンゴロウ	DD	
	Gyrinidae	ミズスマシ	*Gyrinus curtus*	コミズスマシ	CR	EN
			Gyrinus gestroi	ヒメミズスマシ	CR	EN
			Orectochilus punctipennis	コオナガミズスマシ	CR	VU
			Orectochilus agilis	ツマキレオナガミズスマシ	CR	VU
	Hydraenidae	ダルマガムシ	*Ochthebius nakanei*	ナカネダルマガムシ	CR	
	Hydrophilidae	ガムシ	*Berosus pulchellus*	ホソゴマフガムシ	EN	
			Enochrus subsignatus	マルヒラタガムシ	VU	NT
			Hydrochara affinis	コガムシ	VU	DD
			Laccobius fragilis	ヒメシジミガムシ	NT	
	Lucanidae	クワガタムシ	*Dorcus hopei*	オオクワガタ	VU	VU
			Nipponodorcus montivagus adachii	キュウシュウヒメオオクワガタ	NT	
			Platycerus delicatulus delicatulus	ルリクワガタ	NT	
			Platycerus sugitai	ニセコルリクワガタ	NT	
	Geotrupidae	センチコガネ	*Bolbocerosoma nigroplagiatum*	ムネアカセンチコガネ	VU	
	Scarabaeidae	コガネムシ	*Copris ochus*	ダイコクコガネ	VU	VU
			Eophileurus chinensis chinensis	コカブトムシ	NT	
			Ochodaeus maculatus maculatus	アカマダラセンチコガネ	NT	
			Osmoderma opicum	オオチャイロハナムグリ	VU	NT
			Poecilophilides rusticola	アカマダラコガネ	VU	DD
			Protaetia lenzi	キョウトアオハナムグリ	DD	
			Rhomborrhina polita	クロカナブン	NT	
	Buprestidae	タマムシ	*Agrilus marcopoli ulmi*	アオナガタマムシ	VU	
			Eurythyrea tenuistriata	アオタマムシ	DD	
			Scintillatrix pretiosa inexpecta	キンヘリタマムシ九州亜種	VU	
			Chrysochroa fulgidissima fulgidissima	ヤマトタマムシ	NT	
	Cerambycidae	カミキリムシ	*Acalolepta degener*	ヒメビロウドカミキリ	VU	NT
			Akajimatora bella	アカジマトラカミキリ	NT	
			Asaperdaagapanthin	シナノクロフカミキリ	NT	
			Chloridolum thaliodes	オオアオカミキリ	NT	
			Chloridolum viride	ミドリカミキリ	VU	
			Corymbia igai	イガブチヒゲハナカミキリ	NT	
			Eutetrapha sedecimpunctata australis	キュウシュウシナカミキリ	NT	
			Glenea centroguttata	イッシキキモンカミキリ	VU	
			Macropidonia japonica shikokensis	シコクヒメコブハナカミキリ	NT	
			Merionoeda hirsuta	スネケブカヒロコバネカミキリ	DD	
			Necydalis solida	オオホソコバネカミキリ	NT	
			Ohbayashia nigromarginata rufoflava	キュウシュウヘリグロホソハナカミキリ	NT	
			Olenecamptus clarus	ムネホシシロカミキリ	NT	
			Pachypidonia bodemeyeri	ヒゲブトハナカミキリ	NT	
			Pachyta erebia	キベリカタビロハナカミキリ	CR	
			Pyrestes nipponicus	クスベニカミキリ	NT	
			Stenocorus coeruleipennis	フタコブルリハナカミキリ	NT	
			Stenygrinum quadrinotatum	ヨツボシカミキリ	VU	EN
			Thyestilla gebleri	アサカミキリ	DD	VU
			Tengius kurosawai	キュウシュウオオクボカミキリ	NT	
			Xylotrechus chinensis	トラフカミキリ	VU	
			Xenophyrama purpureum	ムナコブハナカミキリ	NT	
	Tenebrionidae	ゴミムシダマシ	*Misolampidius sobosanus*	ソボトゲヒサゴゴミムシダマシ	DD	
	Elateridae	コメツキムシ	*Selatosomus onerosus*	トラフコメツキ	DD	
	Coccinellidae	テントウムシ	*Callicaria superba*	ハラグロオオテントウ	NT	
	Rhynchophoridae	オサゾウムシ	*Cryptoderma fortunei*	オオシロオビゾウムシ	DD	
	Lampyridae	ホタル	*Hotaria parvula*	ヒメボタル	NT	
			Luciola lateralis	ヘイケボタル	NT	
	Acrididae	バッタ	*Mecosteyhusparapleuru*	イナゴモドキ	NT	
	Gryllidae	コオロギ	*Loxoblemmus aomoriensis*	タンボオカメコオロギ	DD	
			Loxoblemmus magnatus	オオオカメコオロギ	DD	
	Phaneropteridae	ツユムシ	*Ducetiaunzenens*	ウンゼンツユムシ	NT	

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			Phaneropteranigroantennat	アシグロツユムシ	DD	
			Euscyrtusjaponicu	カヤコオロギ	NT	
	Cicadidae	セミ	*Terpnosia nigricosta*	エゾハルゼミ	NT	
	Ledridae	ミミズク	*Tituria angulata*	ヒラタミミズク	NT	
	Erotylidae	オオキノコムシ	*Encaustes praenobilis*	オオキノコムシ	NT	
	Pyrochroidae	アカハネムシ	*Tosadendroides okamotoi*	オカモトツヤアナハネムシ	DD	
	Anthicidae	アリモドキ	*Neostereopalpus kyushuensis*	ヒゴケナガクビボソムシ	DD	
	Halictidae	コハナバチ	*Lasioglossum algirum*	ケブカアオコハナバチ（仮称）	DD	
			Lasioglossum simplicior	シャンハイチビコハナバチ（仮称）	DD	
	Helotidae	オオキスイムシ	*Helota cereopunctata*	ミドリオオキスイ	DD	
	Cucujidae	ヒラタムシ	*Cucujus mniszechi*	ルリヒラタムシ	NT	
	Lymantriidae	ドクガ	*Euproctistorasa*	トサンドクガ	NT	
	Noctuidae	ヤガ	*Catocaladul*	オニベシタバ	NT	
			Catocalacolumbin	ナマリキシタバ	NT	
			Orthosiayoshizak	ヒゴキリガ	DD	
	Epicopeiidae	アゲハモドキガ	*Schistomitrafunerali*	フジキオビ	DD	
	Pieridae	シロチョウ	*Leptidea amurensis*	ヒメシロチョウ	VU	EN
	Lycaenidae	シジミチョウ	*Araragi enthea*	オナガシジミ	VU	
			Artopoetes pryeri	ウラゴマダラシジミ	NT	
			Chrysozephyrus brillantinus	アイノミドリシジミ	NT	
			Chrysozephyrus hisamatsusanus	ヒサマツミドリシジミ	EN	
			Chrysozephyrus smaragdinus	メスアカミドリシジミ	NT	
			Favonius jezoensis	エゾミドリシジミ	NT	
			Favonius saphirinus	ウラジロミドリシジミ	VU	
			Favonius ultramarinus	ハヤシミドリシジミ	VU	
			Favoniusoriental	オオミドリシジミ	CS	
			Favonius yuasai	クロミドリシジミ	VU	
			Fixseniaw-albumfenton	カラスシジミ	CS	
			Iratsume orsedice	ウラクロシジミ	DD	
			Japonicalute	アカシジミ	CS	
			Maculinea teleius daisensis	ゴマシジミ（中国・九州亜種）	EN	EN
			Neozephyrus japonicus	ミドリシジミ	VU	
			Shijimiaeoides divina asonis	オオルリシジミ	VU	EN
			Shijimia moorei	ゴイシツバメシジミ	CR	CR
			Sibataniozephyrus fujisanus	フジミドリシジミ	NT	
			Strymonidia mera	ミヤマカラスシジミ	VU	
			Tongeia fischeri	クロツバメシジミ□(西日本亜種)	CR	NT
			Ussuriana stygiana	ウラキンシジミ	NT	
			Wagimo signatus	ウラミスジシジミ	VU	
			Zizina emelina	シルビアシジミ	CR	EN
	Satyridae	ジャノメチョウ	*Lethe marginalis*	クロヒカゲモドキ	VU	EN
	Hesperiidae	セセリチョウ	*Bibasis aquilina chrysaeglia*	キバネセセリ	NT	
	Nymphalidae	タテハチョウ	*Argyronome laodice japonica*	ウラギンスジヒョウモン	CS	VU
			Fabriciana nerippe	オオウラギンヒョウモン	VU	CR
			Kirinia fentoni	キマダラモドキ	VU	NT
			Lethesicel	ヒカゲチョウ	VU	
			Neptis philyra excellens	ミスジチョウ	NT	
			Neptis pryeri setoensis	ホシミスジ	NT	
			Sasakia charonda	オオムラサキ	CS	NT
クモ類 arachnid	Ctenizidae	トタテグモ	*Ummidia fragaria(Dönitz,1887)*	キノボリトタテグモ	NT	NT
	Liphistiidae	ハラフシグモ	*Heptatera higoensis Haupt,1983*	ヒゴキムラグモ	NT	
	Zodariidae	ホウシグモ	*Asceua japonica(Bösenberg & Strand,1906)*	ドウシグモ	DD	DD
両生類 Amphibia	Hynobiidae	サンショウウオ	*Hynobius boulengeri (Thompson,1912)*	オオダイガハラサンショウウオ	CR	VU
			Hynobius dunni Tago,1931	オオイタサンショウウオ	EN	VU
			Hynobius naevius (Schlegel,1838)	ブチサンショウウオ	NT	NT
			Hynobius nebulosus nebulosus (Schlegel,1838)	カスミサンショウウオ	NT	VU
			Hynobius stejnegeri Dunn,1923	ベッコウサンショウウオ	VU	VU
			Hynobiusyatsui Oyama,1947	コガタブチサンショウウオ	NT	NT
	Cryptobranchidae	オオサンショウウオ	*Megalobatrachus japonicus (Temminch,1837)*	オオサンショウウオ	DD	VU
	Salamandridae	イモリ	*Cynops pyrrhogaster pyrrhogaster (Boie,1826)*	イモリ	NT	
	Bufonidae	ヒキガエル	*Bufo japonicus japonicus Schlegel,1838*	ニホンヒキガエル	NT	
	Ranidae	アカガエル	*Rana japonica japonica Gunther,1858*	ニホンアカガエル	NT	
			Rana nigromaculata Hallowell,1860	トノサマガエル	NT	NT
			Rana ornativentris Werner,1904	ヤマアカガエル	NT	
			Rana tagoi tagoi Okada,1928	タゴガエル	NT	
	Rhacophoridae	アオガエル	*Buergeria buergeri (Schlegel,1838)*	カジカガエル	NT	
魚類 Fin	Amblycipitidae	アカザ	*Liobagrus reini Hilgendorf*	アカザ	EX	VU
	Cottidae	カジカ	*Cottus kazika Jordan et Starks*	カマキリ（アユカケ）	EX	
			Cottus pollux Gunther	カジカ（大卵型；河川陸封型）	CR+EN	
			Cottus reinii Hilgendorf	ウツセミカジカ（カジカ小卵型；両側回遊型）	CR+EN	
	Bagridae	ギギ	*Pseudobagrus aurantiacus（Temminck et Schlegel）*	アリアケギバチ	VU	NT
	Petromyzontidae	ヤツメウナギ	*Lethenteron reissneri（Dybowski）*	スナヤツメ	NT	
	Percichthyidae	スズキ	*Coreoperca kawamebari（Temminck et Schlegel）*	オヤニラミ	VU	
	Cyprinidae	コイ	*Acheilognathus tabira subsp.2*	セボシタビラ	NT	VU
			Acheilognathus rhombeus(Temminck et Schlegel)	カネヒラ	NT	
			Rhodeus atremius atremius(Jordan et Thompson)	カゼトゲタナゴ	NT	VU

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					Kumamoto 熊本県RDB	Japan 環境省RDB
			Rhodeus ocellatus kurumeus （Jordan et Thompson）	ニッポンバラタナゴ	CR+EN	CR
			Sarcocheilichthys variegatus variegatus(Temminck et Schlegel)	カワヒガイ	NT	
			Tanakia lanceolata(Temminck et Schlegel)	ヤリタナゴ	NT	
			Tanakia limbata(Temminck et Schlegel)	アブラボテ	NT	
	Cobitidae	ドジョウ	*Cobitis sp.2 subsp.3*	スジシマドジョウ㊁型種九州型	CS	
	Syngnathidae	ヨウジウオ	*Hippichthys（Parasyngnathus）penicillus （Cantor）*	ガンテンイシヨウジ	CS	
			Microphis（Oostethus）brachyurus brachyurus （Bleeker）	テングヨウジ	CS	
	Gobiidae	ハゼ	*Acanthogobius lactipes （Hilgendorf）*	アシシロハゼ	CS	
			Acentrogobius pflaumii （Bleeker）	スジハゼ	CS	
			Awaous ocellaris （Broussonet）	ミナミハゼ	CS	
			Chaenogobius castaneus (O'Shaughnessy)	ビリンゴ	CS	
			Chaenogobius sp.1	スミウキゴリ	CS	
			Eleotris melanosoma Bleeker	オカメハゼ	CS	
			Leucopsarion petersii Hilgendorf	シロウオ	CS	NT
			Oligolepis acutipennis （Valenciennes）	ノボリハゼ	CS	
			Oligolepis stomias （Smith）	クチサケハゼ	CS	
			Redigobius bikolanus (Herre)	ヒナハゼ	CS	
			Rhinogobius sp. CO	ルリヨシノボリ	CS	
			Sicyopterus japonicus （Tanaka）	ボウズハゼ	CS	
			Taenioides cirratus （Blyth）	チワラスボ	CS	
			Taenioides rubicundus （Hamilton）	ワラスボ	CS	
			Tridentiger barbatus （Gunther）	ショウキハゼ	CS	
	Triacanthidae	ギマ	*Triacanthus biaculeatus （Bloch）*	ギマ	CS	
哺乳類 Mammalia	Soricidae	トガリネズミ	*Chimarrogale platycephala (Temminck,1842)*	カワネズミ	NT	LP
			Crocidura dsinezumi (Temminck,1842)	ニホンジネズミ	CS	
	Muridae	ネズミ	*Eothenomys smithii (Thomas,1905)*	スミスネズミ	CS	
			Micromys minutus (Pallas,1771)	カヤネズミ	NT	
			Microtus mantebelli (Milne-Edwards,1872)	ハタネズミ	CS	
	Talpidae	モグラ	*Dymecodon pilirostris True,1886*	ヒメヒミズ	CR	
	Molossidae	オヒキコウモリ	*Tadarida insignis (Blyth,1861)*	オヒキコウモリ	DD	VU
	Rhinolophidae	キクガシラコウモリ	*Rhinolophus cornutus Temminck,1835*	コキクガシラコウモリ	NT	
	Vespertilionidae	ヒナコウモリ	*Miniopterus fuliginosus (Hodgson,1835)*	ユビナガコウモリ	CS	
			Murina hilgendorfi (Peters,1880)	テングコウモリ	VU	
			Murina ussuriensis Ognev,1913	コテングコウモリ	VU	
			Myotis macrodactylus (Temminck,1840)	モモジロコウモリ	NT	
			Myotis nattereri (Kuhl,1817)	ノレンコウモリ	EN	
			Myotis pruinosus Yoshiyuki,1971	クロホオヒゲコウモリ	CR	VU
			Nyctalus aviator Thomas,1911	ヤマコウモリ	VU	VU
			Vespertilio superans Thomas,1880	ヒナコウモリ	VU	
	Sciuridae	リス	*Petaurista leucogenys (Temminck,1827)*	ムササビ	NT	
			Pteromys momonga Temminck,1844	ニホンモモンガ	EN	
	Gliridae	ヤマネ	*Glirulus japonicus (Schinz,1845)*	ヤマネ	VU	
	Mustelidae	イタチ	*Meles meles (Linnaeus,1758)*	アナグマ	CS	
			Mustela itatsi Temminck,1844	イタチ	NT	
	Canidae	イヌ	*Canis lupus （Linnaeus,1758）*	オオカミ	EX	EX
	Bovidae	ウシ	*Capricornis crispus (Temminck,1845)*	カモシカ	EN	LP
	Ursidae	クマ	*Selenarctos thibetanus(Cuvier,1823)*	ツキノワグマ	EW	LP
爬虫類 Reptilia	Geoemydidae	イシガメ	*Mauremys japonica (Temminck et Schlegel,1835)*	イシガメ	NT	
	Colubridae	ナミヘビ	*Achalinus spinalis Peters,1869*	タカチホヘビ	NT	
			Dinodon orientalis (Hilgendorf,1880)	シロマダラ	NT	
貝類 Shellfish	Helicinidae	ヤマキサゴ	*Waldemaria japonica (A. Adams, 1861)*	ヤマキサゴ	CR	
	Camaenidae	ナンバンマイマイ	*Nipponochloritis osumiensis (Pilsbry & Hirase, 1904)*	オオスミビロウドマイマイ	CR	NT
			Nipponochloritis fragosus Minato, 1983	オオウスビロウドマイマイ	CR	VU
			Satsuma (Satsuma) myomphala myomphala (Martens, 1865)	コベソマイマイ	NT	
	Buliminidae	ｷｾﾙｶﾞｲﾓﾄﾞｷ	*Mirus reinianus (Kobelt, 1875)*	キセルガイモドキ	VU	
	Clausiliidae	キセルガイ	*Vastina (Mesophaedusa) viridiflava (Boettger, 1877)*	アメイロギセル	NT	
			Vastina (Vastina) okimodoki Minato & Tada, 1990	オキモドキギセル	DD	NT
			Mesophaedusacymatodes(Pilsbry,1905)	ナミハダギセル	DD	
			Tyrannophaedusa (Decolliphaedusa) pilsbryana (Ancey, 1904)	ピルスブリギセル	DD	
			Pinguiphaedusa tosana tosana (Pilsbry, 1901)	トサギセル	CS	NT
			Pinguiphaedusa awajiensis (Pilsbry, 1900)	アワジギセル	CS	
	Diplommatinidae	ゴマガイ	*Arinia japonica Pilsbry & Hirase, 1903*	シリブトゴマガイ	DD	VU
	Arionidae	オオコウラナメクジ	*Nipponarion carinatus Yamaguchi & Habe, 1955*	オオコウラナメクジ	DD	NT
植物 Plants	Psilotaceae	ﾏﾂﾊﾞﾗﾝ	*Psilotum nudum*	ﾏﾂﾊﾞﾗﾝ	EN	NT
	Lycopodiaceae	ﾋｶｹﾞﾉｶｽﾞﾗ	*Lycopodium obscurum*	ﾏﾝﾈﾝｽｷﾞ	NT	
			Lycopodium sieboldii	ﾋﾓﾗﾝ	VU	EN
維管束植物	Hymenophyllaceae	ｺｹｼﾉﾌﾞ	*Lacosteopsis orientalis var. abbreviata*	ﾋﾒﾊｲﾎﾗｺﾞｹ	NT	
Vascular	Isoetaceae	ﾐｽﾞﾆﾗ	*Isoetes sinensis*	ｼﾅﾐｽﾞﾆﾗ	CR	NT
Plants	Vittariaceae	ｼｼﾗﾝ	*Antrophyum obovatum*	ﾀｷﾐｼﾀﾞ	CR	EN
	Blechnaceae	ｼｼｶﾞｼﾗ	*Struthiopteris amabilis*	ｵｻｼﾀﾞ	NT	
（シダ植物）	Dryopteridaceae	ｵｼﾀﾞ	*Dryopteris pycnopteroides*	ﾜｶﾅｼﾀﾞ	EN	
(Pteridophyta)			*Dryopteris tokyoensis*	ﾀﾆﾍｺﾞ	NT	
	Woodsiaceae	ｲﾜﾃﾞﾝﾀﾞ	*Athyrium kirisimaense*	ｷﾘｼﾏﾍﾋﾞﾉﾈｺﾞｻﾞ	EN	
			Athyrium tashiroi	ｳｽﾊﾞﾍﾋﾞﾉﾈｺﾞｻﾞ	EN	
			Athyrium strigillosum	ｺﾓﾁｲﾇﾜﾗﾋﾞ	CR	EN
			Cornopteris hakonensis	ﾊｺﾈｼｹﾁｼﾀﾞ	VU	
			Deparia otomasui	ｱｿｼｹｼﾀﾞ	VU	EN

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					Kumamoto 熊本県RDB	Japan 環境省RDB
			Woodsia macrochlaena	ｺｶﾞﾈｼﾀﾞ	VU	
			Woodsia manchuriensis	ﾌｸﾛｼﾀﾞ	VU	
	Polypodiaceae	ｳﾗﾎﾞｼ	*Lepisorus annuifrons*	ﾎﾃｲｼﾀﾞ	NT	
(種子植物)	Pinaceae	ﾏﾂ	*Picea polita*	ﾊﾘﾓﾐ	VU	
(Magnoliophyta)	Salicaceae	ﾔﾅｷﾞ	*Salix integra*	ｲﾇｺﾘﾔﾅｷﾞ	VU	
			Salix subopposita	ﾉﾔﾅｷﾞ	NT	
	Urticaceae	ｲﾗｸｻ	*Lecanthus peduncularis*	ﾁｮｸｻﾞｷﾐｽﾞ	VU	EN
			Pilea hamaoi	ﾐｽﾞ	DD	
	Polygonaceae	ﾀﾃﾞ	*Bistorta major* var. *japonica*	ｲﾌﾞｷﾄﾗﾉｵ	NT	
			Persicaria makinoi	ｵｵﾈﾊﾞﾘﾀﾃﾞ	DD	
			Persicaria taquetii	ﾇｶﾎﾞﾀﾃﾞ	DD	VU
	Caryophyllaceae	ﾅﾃﾞｼｺ	*Lychnis kiusiana*	ｵｸﾞﾗｾﾝﾉｳ	EN	VU
			Lychnis sieboldii	ﾏﾂﾓﾄｾﾝﾉｳ	EN	VU
			Moehringia trinervia	ﾀﾁﾊｺﾍﾞ	EN	VU
			Pseudostellaria heterophylla	ﾜﾀﾞｿｳ	VU	
	Ranunculaceae	ｷﾝﾎﾟｳｹﾞ	*Aconitum ciliare*	ﾊﾅｶｽﾞﾗ	CR	EN
			Adonis multiflora	ﾐﾁﾉｸﾌｸｼﾞｭｿｳ	VU	NT
			Anemone keiskeana	ﾕｷﾜﾘｲﾁｹﾞ	NT	
			Anemone raddeana	ｱｽﾞﾏｲﾁｹﾞ	EN	
			Caltha palustris var. *nipponica*	ﾘｭｳｷﾝｶ	VU	
			Dichocarpum trachyspermum	ﾄｳｺﾞｸｻﾊﾞﾉｵ	NT	
			Pulsatilla cernua	ｵｷﾅｸﾞｻ	VU	VU
			Thalictrum actaefolium	ｼｷﾞﾝｶﾗﾏﾂ	NT	
			Thalictrum filamentosum var. *tenurum*	ﾐﾔﾏｶﾗﾏﾂ	EN	
			Thalictrum simplex var. *brevipes*	ﾉｶﾗﾏﾂ	VU	VU
	Ceratophyllaceae	ﾏﾂﾓ	*Ceratophyllum demersum*	ﾏﾂﾓ	VU	
	Berberidaceae	ﾒｷﾞ	*Epimedium grandiflorum* var. *higoense*	ﾋｺﾞｲｶﾘｿｳ	NT	
	Saururaceae	ﾄﾞｸﾀﾞﾐ	*Saururus chinensis*	ﾊﾝｹﾞｼｮｳ	NT	
	Aristolochiaceae	ｳﾏﾉｽｽﾞｸｻ	*Aristolochia kaempferi*	ｵｵﾊﾞｳﾏﾉｽｽﾞｸｻ	NT	
			Asarum misandrum	ｱｿｻｲｼﾝ	CR	
			Asiasarum dimidiatum	ｸﾛﾌﾈｻｲｼﾝ	NT	NT
	Paeoniaceae	ﾎﾞﾀﾝ	*Paeonia obovata*	ﾍﾞﾆﾊﾞﾅﾔﾏｼｬｸﾔｸ	CR	VU
	Actinidiaceae	ﾏﾀﾀﾋﾞ	*Actinidia hypoleuca*	ｳﾗｼﾞﾛﾏﾀﾀﾋﾞ	NT	
	Guttiferae	ｵﾄｷﾞﾘｿｳ	*Hypericum ascyron*	ﾄﾓｴｿｳ	CR	
			Hypericum ascyron var. *longistylum*	ｺｳﾗｲﾄﾓｴｿｳ	EN	VU
			Hypericum sampsonii	ﾂｷﾇｷｵﾄｷﾞﾘ	CR	EN
	Papaveraceae	ｹｼ	*Corydalis raddeana*	ﾅｶﾞﾐﾉﾂﾙｷｹﾏﾝ	CS	NT
			Hylomecon japonicum	ﾔﾏﾌﾞｷｿｳ	VU	
	Brassicaceae	ｱﾌﾞﾗﾅ	*Dontostemon dentatus*	ﾊﾅﾊﾀｻﾞｵ	EX	CR
			Draba nemorosa	ｲﾇﾅｽﾞﾅ	NT	
			Rorippa cantoniensis	ｺｲﾇｶﾞﾗｼ	VU	NT
	Menyanthaceae	ﾐﾂｶﾞｼﾜ	*Menyanthes trifoliata*	ﾐﾂｶﾞｼﾜ	EX	
	Crassulaceae	ﾍﾞﾝｹｲｿｳ	*Hylotelephium viride*	ｱｵﾍﾞﾝｹｲ	NT	
			Meterostachys sikokianus	ﾁｬﾎﾞﾂﾒﾚﾝｹﾞ	CR	VU
	Saxifragaceae	ﾕｷﾉｼﾀ	*Mitella pauciflora*	ｺﾁｬﾙﾒﾙｿｳ	EN	
			Parnassia foliosa var. *nummularia*	ｼﾗﾋｹﾞｿｳ	NT	
			Peltoboykinia watanabei	ﾜﾀﾅﾍﾞｿｳ	EN	VU
			Penthorum chinense	ﾀｺﾉｱｼ	VU	NT
			Ribes ambiguum	ﾔｼｬﾋﾞｼｬｸ	VU	NT
			Saxifraga fortunei var. *incisolobata*	ﾀﾞｲﾓﾝｼﾞｿｳ	NT	
			Saxifraga sendaica	ｾﾝﾀﾞｲｿｳ	VU	NT
	Rosaceae	ﾊﾞﾗ	*Chaenomeles japonica*	ｸｻﾎﾞｹ	CR	
			Filipendula multijuga	ｼﾓﾂｹｿｳ	EN	
			Potentilla dickinsii	ｲﾜｷﾝﾊﾞｲ	VU	
			Prunus maximowiczii	ﾐﾔﾏｻﾞｸﾗ	VU	
			Sanguisorba tenuifolia	ﾅｶﾞﾎﾞﾉｼﾛﾜﾚﾓｺｳ	VU	
			Sanguisorba tenuifolia var. *purpurea*	ﾅｶﾞﾎﾞﾉｱｶﾜﾚﾓｺｳ	CR	
			Sorbus alnifolia	ｱｽﾞｷﾅｼ	NT	
	Leguminosae	ﾏﾒ	*Cladrastis platycarpa*	ﾌｼﾞｷ	EN	
			Gleditsia japonica	ｻｲｶﾁ	VU	
			Lathyrus quinquenervius	ﾚﾝﾘｿｳ	VU	
			Lespedeza tomentosa	ｲﾇﾊｷﾞ	EN	VU
			Lespedeza virgata	ﾏｷｴﾊｷﾞ	NT	
			Vicia nipponica	ﾖﾂﾊﾞﾊｷﾞ	NT	
			Vicia venosa var. *cuspidata*	ｴﾋﾞﾗﾌｼﾞ	NT	
			Wisteria floribunda	ﾌｼﾞ	VU	
	Geraniaceae	ﾌｳﾛｿｳ	*Geranium krameri*	ﾀﾁﾌｳﾛ	NT	
			Geranium shikokianum	ｲﾖﾌｳﾛ	NT	NT
			Geranium soboliferum var. *kiusianum*	ﾂｸｼﾌｳﾛ	CR	VU
	Aceraceae	ｶｴﾃﾞ	*Acer nikoense*	ﾒｸﾞｽﾘﾉｷ	NT	
	Celastraceae	ﾆｼｷｷﾞ	*Euonymus melananthus*	ｻﾜﾀﾞﾂ	NT	
	Buxaceae	ﾂｹﾞ	*Pachysandra terminalis*	ﾌｯｷｿｳ	NT	
	Rhamnaceae	ｸﾛｳﾒﾓﾄﾞｷ	*Rhamnus yoshinoi*	ｷﾋﾞﾉｸﾛｳﾒﾓﾄﾞｷ	NT	VU
	Violaceae	ｽﾐﾚ	*Viola hirtipes*	ｻｸﾗｽﾐﾚ	NT	
			Viola orientalis	ｷｽﾐﾚ	NT	
			Viola rossii	ｱｹﾎﾞﾉｽﾐﾚ	NT	
			Viola tokubudhiana Makino var.takedana	ﾋﾅｽﾐﾚ	VU	

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			Viola yezoensis	ﾋｶｹﾞｽﾐﾚ	EN	
			Viola yezoensis var. *asoana*	ｱｿﾋｶｹﾞｽﾐﾚ	CR	
	Melastomataceae	ﾉﾎﾞﾀﾝ	*Osbeckia chinensis*	ﾋﾒﾉﾎﾞﾀﾝ	EN	VU
	Lythraceae	ﾐｿﾊｷﾞ	*Rotala leptopetala* var. *littorea*	ﾐｽﾞｷｶｼｸﾞｻ	CR	VU
		ﾐｿﾊｷﾞ	*Rotala pusilla*	ﾐｽﾞﾏﾂﾊﾞ	NT	VU
	Umbelliferae	ｾﾘ	*Angelica dahurica*	ｵｵｼｼｳﾄﾞ	EN	
			Angelica ubatakensis	ｳﾊﾞﾀｹﾆﾝｼﾞﾝ	CR	EN
			Bupleurum scorzoneraefolium var. *stenophyllum*	ﾐｼﾏｻｲｺ	EN	VU
			Peucedanum terebinthaceum	ｶﾜﾗﾎﾞｳﾌｳ	CR	
			Pterygopleurum neurophyllum	ｼﾑﾗﾆﾝｼﾞﾝ	CR	VU
			Sanicula tuberculata	ﾌｷﾔﾐﾂﾊﾞ	CR	
			Sium sisarum	ﾑｶｺﾞﾆﾝｼﾞﾝ	NT	
			Sium suave var. *nipponicum*	ｻﾜｾﾞﾘ	CR	
			Spuriopimpinella calycina	ｶﾉﾂﾒｿｳ	CR	
	Diapensiaceae	ｲﾜｳﾒ	*Schizocodon soldanelloides*	ｲﾜｶｶﾞﾐ	NT	
	Pyrolaceae	ｲﾁﾔｸｿｳ	*Chimaphila japonica*	ｳﾒｶﾞｻｿｳ	NT	
			Pyrola nephrophylla	ﾏﾙﾊﾞﾉｲﾁﾔｸｿｳ	VU	
	Ericaceae	ﾂﾂｼﾞ	*Rhododendron japonicum*	ﾚﾝｹﾞﾂﾂｼﾞ	EW	
			Rhododendron mucronatum var. *ciliatum*	ｹﾞﾝｶｲﾂﾂｼﾞ	VU	NT
			Rhododendron tschonoskii	ｺﾒﾂﾂｼﾞ	NT	
	Primulaceae	ｻｸﾗｿｳ	*Androsace umbellata*	ﾘｭｳｷｭｳｺｻﾞｸﾗ	CR	
			Lysimachia barystachys	ﾉｼﾞﾄﾗﾉｵ	CR	VU
			Lysimachia leucantha	ｻﾜﾄﾗﾉｵ	CR	EN
			Lysimachia tanakae	ﾐﾔﾏｺﾅｽﾋﾞ	NT	
			Lysimachia vulgaris var. *davurica*	ｸｻﾚﾀﾞﾏ	VU	
			Primula sieboldii	ｻｸﾗｿｳ	VU	NT
	Gentianaceae	ﾘﾝﾄﾞｳ	*Swertia pseudochinensis*	ﾑﾗｻｷｾﾝﾌﾞﾘ	VU	NT
			Swertia swertopsis	ｼﾉﾉﾒｿｳ	EN	VU
	Styracaceae	ｴｺﾞﾉｷ	*Styrax obassia*	ﾊｸｳﾝﾎﾞｸ	NT	
	Loganiaceae	ﾏﾁﾝ	*Mitrasacme indica*	ﾋﾒﾅｴ	CR	VU
	Asclepiadaceae	ｶﾞｶﾞｲﾓ	*Cynanchum amplexicaule*	ﾛｸｵﾝｿｳ	EN	VU
			Cynanchum atratum	ﾌﾅﾊﾞﾗｿｳ	NT	VU
			Cynanchum nipponicum var. *glabrum*	ﾀﾁｶﾓﾒﾂﾞﾙ	NT	
			Cynanchum paniculatum	ｽｽﾞｻｲｺ	VU	NT
			Cynanchum wilfordii	ｺｲｹﾏ	NT	
	Rubiaceae	ｱｶﾈ	*Galium kinuta*	ｷﾇﾀｿｳ	VU	
			Galium pseudo-asprellum	ｵｵﾊﾞﾉﾔｴﾑｸﾞﾗ	DD	
			Hedyotis chrysotricha	ｺﾊﾞﾝﾑｸﾞﾗ	EN	EN
			Pseudopyxis depressa	ｲﾅﾓﾘｿｳ	NT	
	Polemoniaceae	ﾊﾅｼﾉﾌﾞ	*Polemonium kiushianum*	ﾊﾅｼﾉﾌﾞ	CR	CR
	Boraginaceae	ﾑﾗｻｷ	*Lithospermum erythrorhizon*	ﾑﾗｻｷ	EX	EN
			Lithospermum zollingeri	ﾎﾀﾙｶｽﾞﾗ	VU	
			Trigonotis nakaii	ﾁｮｳｾﾝｶﾒﾊﾞｿｳ	CR	EN
			Trigonotis radicans	ｹﾙﾘｿｳ	CR	VU
	Verbenaceae	ｸﾏﾂﾂﾞﾗ	*Callicarpa dichotoma*	ｺﾑﾗｻｷ	VU	
	Labiatae	ｼｿ	*Agastache rugosa*	ｶﾜﾐﾄﾞﾘ	VU	
			Ajuga ciliata var. *villosior*	ｶｲｼﾞﾝﾄﾞｳ	EN	VU
			Chelonopsis longipes	ﾀﾆｼﾞｬｺｳｿｳ	NT	NT
			Chelonopsis moschata	ｼﾞｬｺｳｿｳ	NT	
			Leonurus japonicus	ﾒﾊｼﾞｷ	NT	
			Leonurus macranthus	ｷｾﾜﾀ	VU	VU
			Lycopus lucidus	ｼﾛﾈ	CR	
			Mosla japonica	ｵｵﾔﾏｼﾞｿ	EN	NT
			Salvia plebeia	ﾐｿﾞｺｳｼﾞｭ	NT	NT
			Scutellaria dependens	ﾋﾒﾅﾐｷ	EN	
			Scutellaria shikokiana	ﾐﾔﾏﾅﾐｷ	CR	
	Solanaceae	ﾅｽ	*Physaliastrum japonicum*	ｲｶﾞﾎｵｽﾞｷ	NT	
			Physaliastrum savatieri	ｱｵﾎｵｽﾞｷ	CR	VU
			Physalis chamaesarachoides	ﾔﾏﾎｵｽﾞｷ	NT	EN
	Scrophulariaceae	ｺﾞﾏﾉﾊｸﾞｻ	*Centranthera cochinchinensis* ssp. *lutea*	ｺﾞﾏｸｻ	VU	VU
			Deinostema violaceum	ｻﾜﾄｳｶﾞﾗｼ	DD	
			Euphrasia insignis ssp. *iinumae* var. *kiusiana*	ｷｭｳｼｭｳｺｺﾞﾒｸﾞｻ	DD	
			Euphrasia multifolia	ﾂｸｼｺｺﾞﾒｸﾞｻ	VU	EN
			Limnophila chinensis ssp. *aromatica*	ｼｿｸｻ	CR	
			Pseudolysimachion kiusianum	ﾂｸｼﾄﾗﾉｵ	EN	VU
			Pseudolysimachion linariifolium	ﾎｿﾊﾞﾋﾒﾄﾗﾉｵ	VU	EN
			Pseudolysimachion rotundum var. *subintegrum*	ﾔﾏﾄﾗﾉｵ	VU	
			Scrophularia buergeriana	ｺﾞﾏﾉﾊｸﾞｻ	NT	NT
			Veronica miqueliana var. *takedana*	ｺｸﾜｶﾞﾀｿｳ	NT	
			Veronica polita var. *lilacina*	ｲﾇﾉﾌｸﾞﾘ	EN	VU
			Veronicastrum sibiricum var. *zuccarinii*	ﾂｸｼｸｶﾞｲｿｳ	CR	VU
	Gesneriaceae	ｲﾜﾀﾊﾞｺ	*Lysionotus pauciflorus*	ｼｼﾝﾗﾝ	VU	VU
	Orobanchaceae	ﾊﾏｳﾂﾎﾞ	*Phacellanthus tubiflorus*	ｷﾖｽﾐｳﾂﾎﾞ	EN	
	Lentibulariaceae	ﾀﾇｷﾓ	*Utricularia bifida*	ﾐﾐｶｷｸﾞｻ	NT	
			Utricularia caerulea	ﾎｻﾞｷﾉﾐﾐｶｷｸﾞｻ	EN	
			Utricularia exoleta	ﾐｶﾜﾀﾇｷﾓ	EX	VU
			Utricularia uliginosa	ﾑﾗｻｷﾐﾐｶｷｸﾞｻ	NT	NT

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	Caprifoliaceae	ｽｲｶｽﾞﾗ	*Lonicera cerasina*	ｳｽﾊﾞﾋｮｳﾀﾝﾎﾞｸ	EN	VU
			Lonicera mochidzukiana var. *nomurana*	ﾔﾏﾋｮｳﾀﾝﾎﾞｸ	EN	
			Weigela decora	ﾆｼｷｳﾂｷﾞ	VU	
	Dipsacaceae	ﾏﾂﾑｼｿｳ	*Dipsacus japonicus*	ﾅﾍﾞﾅ	NT	
	Adoxaceae	ﾚﾝﾌﾟｸｿｳ	*Adoxa moschatellina*	ﾚﾝﾌﾟｸｿｳ	CR	
	Campanulaceae	ｷｷｮｳ	*Adenophora pereskiifolia*	ﾏﾝｼｭｳﾂﾘｶﾞﾈﾆﾝｼﾞﾝ	CR	
			Campanula glomerata var. *dahurica*	ﾔﾂｼﾛｿｳ	EN	EN
			Codonopsis ussuriensis	ﾊﾞｱｿﾌﾞ	NT	VU
			Lobelia sessilifolia	ｻﾜｷﾞｷｮｳ	NT	
			Platycodon grandiflorum	ｷｷｮｳ	CR	VU
	Asteraceae	ｷｸ	*Achillea alpina* ssp. *subcartilaginea*	ｱｿﾉｺｷﾞﾘｿｳ	CS	NT
			Artemisia keiskeana	ｲﾇﾖﾓｷﾞ	NT	
			Artemisia rubripes	ﾔﾌﾞﾖﾓｷﾞ	VU	VU
			Artemisia stolonifera	ﾋﾛﾊﾔﾏﾖﾓｷﾞ	NT	NT
			Aster maackii	ﾋｺﾞｼｵﾝ	EN	VU
			Aster tataricus	ｼｵﾝ	VU	VU
			Atractylodes japonica	ｵｹﾗ	CR	
			Cacalia farfaraefolia	ｳｽｹﾞﾀﾏﾌﾞｷ	NT	
			Cacalia nipponica	ﾂｸｼｺｳﾓﾘｿｳ	NT	
			Cirsium dipsacolepis	ﾓﾘｱｻﾞﾐ	NT	
			Cirsium lineare	ﾔﾅｷﾞｱｻﾞﾐ	EN	
			Echinops setifer	ﾋｺﾞﾀｲ	EN	VU
			Hololeion krameri	ｽｲﾗﾝ	VU	
			Hololeion maximowiczii	ﾁｮｳｾﾝｽｲﾗﾝ	VU	
			Inula japonica	ｵｸﾞﾙﾏ	NT	
			Inula linariaefolia	ﾎｿﾊﾞｵｸﾞﾙﾏ	CS	VU
			Ixeris chinensis ssp. *strigosa*	ﾀｶｻｺﾞｿｳ	DD	VU
			Lactuca raddeana	ﾁｮｳｾﾝﾔﾏﾆｶﾞﾅ	DD	
			Leucanthemella lineare	ﾐｺｼｷﾞｸ	EX	VU
			Ligularia fischeri var. *takeyukii*	ｱｿﾀｶﾗｺｳ	NT	VU
			Miyamayomena savatieri	ﾐﾔﾏﾖﾒﾅ	DD	
			Pertya glabrescens	ﾅｶﾞﾊﾞﾉｺｳﾔﾎﾞｳｷ	CR	
			Pertya scandens	ｺｳﾔﾎﾞｳｷ	DD	
			Saussurea gracilis	ﾎｸﾁｱｻﾞﾐ	NT	
			Saussurea japonica	ﾋﾅﾋｺﾞﾀｲ	EN	EN
			Saussurea maximowiczii	ﾐﾔｺｱｻﾞﾐ	VU	
			Saussurea pulchella	ﾋﾒﾋｺﾞﾀｲ	EN	VU
			Saussurea scaposa	ｷﾘｼﾏﾋｺﾞﾀｲ	NT	
			Saussurea ussuriensis	ｷｸｱｻﾞﾐ	CR	
			Senecio flammeus	ﾀｶﾈｺｳﾘﾝｷﾞｸ	CR	EN
			Senecio nemorensis	ｷｵﾝ	NT	
			Syneilesis palmata	ﾔﾌﾞﾚｶﾞｻ	VU	
			Synurus palmatopinnatifidus	ｷｸﾊﾞﾔﾏﾎﾞｸﾁ	CR	
			Taraxacum japonicum	ｶﾝｻｲﾀﾝﾎﾟﾎﾟ	CR	
			Taraxacum kiushianum	ﾂｸｼﾀﾝﾎﾟﾎﾟ	CR	VU
	Alismataceae	ｵﾓﾀﾞｶ	*Sagittaria aginashi*	ｱｷﾞﾅｼ	NT	NT
	Hydrocharitaceae	ﾄﾁｶｶﾞﾐ	*Hydrocharis dubia*	ﾄﾁｶｶﾞﾐ	CR	NT
			Ottelia japonica	ﾐｽﾞｵｵﾊﾞｺ	VU	VU
			Vallisneria asiatica	ｾｷｼｮｳﾓ	NT	
	Potamogetonaceae	ﾋﾙﾑｼﾛ	*Potamogeton distinctus*	ﾋﾙﾑｼﾛ	NT	
			Potamogeton fryeri	ﾌﾄﾋﾙﾑｼﾛ	NT	
	Liliaceae	ﾕﾘ	*Alectorurus yedoensis*	ｹｲﾋﾞﾗﾝ	NT	
			Asparagus oligoclonos	ﾀﾏﾎﾞｳｷ	CR	EN
			Convallaria keiskei	ｽｽﾞﾗﾝ	EN	
			Fritillaria amabilis	ﾎｿﾊﾞﾅｺﾊﾞｲﾓ	EN	NT
			Hemerocallis fulva var. *longituba*	ﾉｶﾝｿﾞｳ	CR	
			Lilium callosum	ﾉﾋﾒﾕﾘ	NT	NT
			Lilium concolor var. *partheneioni*	ﾋﾒﾕﾘ	CR	EN
			Polygonatum inflatum	ﾐﾄﾞﾘﾖｳﾗｸ	VU	
			Polygonatum involucratum	ﾜﾆｸﾞﾁｿｳ	EN	
			Tricyrtis hirta	ﾎﾄﾄｷﾞｽ	VU	
			Tricyrtis latifolia	ﾀﾏｶﾞﾜﾎﾄﾄｷﾞｽ	VU	
	Hypoxidaceae	ｷﾝﾊﾞｲｻﾞｻ	*Hypoxis aurea*	ｺｷﾝﾊﾞｲｻﾞｻ	EN	
	Iridaceae	ｱﾔﾒ	*Iris rossii*	ｴﾋﾒｱﾔﾒ	CR	VU
	Juncaceae	ｲｸﾞｻ	*Juncus bufonius*	ﾋﾒｺｳｶﾞｲｾﾞｷｼｮｳ	NT	
			Juncus yokoscensis	ｲﾇｲ	VU	
	Eriocaulaceae	ﾎｼｸｻ	*Eriocaulon cinereum*	ﾎｼｸｻ	NT	
			Eriocaulon decemflorum var. *nipponicum*	ｲﾄｲﾇﾉﾋｹﾞ	VU	
			Eriocaulon hondoense	ﾆｯﾎﾟﾝｲﾇﾉﾋｹﾞ	NT	
			Eriocaulon miquelianum	ｲﾇﾉﾋｹﾞ	VU	
			Eriocaulon parvum	ｸﾛﾎｼｸｻ	CR	VU
			Eriocaulon sikokianum	ｼﾛｲﾇﾉﾋｹﾞ	NT	
	Poaceae	ｲﾈ	*Agropyron humidorum*	ﾐｽﾞﾀｶﾓｼﾞｸﾞｻ	CR	VU
			Asperella japonica	ｲﾜﾀｹｿｳ	NT	
			Asperella longe-aristata	ｱｽﾞﾏｶﾞﾔ	NT	
			Calamagrostis autumnalis	ｷﾘｼﾏﾉｶﾞﾘﾔｽ	NT	CR
			Eulalia quadrinervis	ｳﾝﾇｹﾓﾄﾞｷ	VU	NT

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Class 分類	Family 科		Scientific Name 学名	Name 和名	Category カテゴリー	
					Kumamoto 熊本県RDB	Japan 環境省RDB
			Glyceria leptolepis	ﾋﾛﾊﾉﾄﾞｼﾞｮｳﾂﾅｷﾞ	EN	
			Hierochloe bungeana	ｺｳﾎﾞｳ	CR	
			Lophochloa cristata	ﾐﾉﾎﾞﾛ	CR	
			Milium effusum	ｲﾌﾞｷﾇｶﾎﾞ	NT	
			Moliniopsis japonica	ﾇﾏｶﾞﾔ	CR	
	Araceae	ｻﾄｲﾓ	*Acorus calamus*	ｼｮｳﾌﾞ	NT	
			Arisaema heterophyllum	ﾏｲﾂﾞﾙﾃﾝﾅﾝｼｮｳ	EN	VU
	Sparganiaceae	ﾐｸﾘ	*Sparganium fallax*	ﾔﾏﾄﾐｸﾘ	VU	NT
			Sparganium stenophyllum	ﾋﾒﾐｸﾘ	CR	VU
	Cyperaceae	ｶﾔﾂﾘｸﾞｻ	*Bulbostylis densa* var. *capitata*	ｲﾄﾃﾝﾂｷ	NT	NT
			Carex chrysolepis var. *odontostoma*	ﾐﾔﾏｲﾜｽｹﾞ	CR	VU
			Carex confertiflora	ﾐﾔﾏｼﾗｽｹﾞ	CR	
			Carex dickinsii	ｵﾆｽｹﾞ	VU	
			Carex duvaliana	ｹｽｹﾞ	NT	
			Carex fedia var. *miyabei*	ﾋﾞﾛｰﾄﾞｽｹﾞ	NT	
			Carex fernaldiana	ｲﾄｽｹﾞ	NT	
			Carex formosensis	ﾀｲﾜﾝｽｹﾞ	CS	VU
			Carex humilis	ﾎｿﾊﾞﾋｶｹﾞｽｹﾞ	NT	
			Carex kujuzana	ｸｼﾞｭｳﾂﾘｽｹﾞ	CR	NT
			Carex latisquamea	ﾊﾀﾍﾞｽｹﾞ	EX	EN
			Carex omiana	ﾔﾁｶﾜｽﾞｽｹﾞ	VU	
			Carex papulosa	ｴｿﾞﾂﾘｽｹﾞ	EN	
			Carex satsumensis	ｱﾌﾞﾗｼﾊﾞ	NT	
			Carex thunbergii	ｱｾﾞｽｹﾞ	EN	
			Eleocharis kuroguwai	ｸﾛｸﾞﾜｲ	NT	
			Eleocharis tetraquetra	ﾏｼｶｸｲ	NT	
			Eleocharis wichurae	ｼｶｸｲ	NT	
			Fimbristylis pierotii	ﾉﾊﾗﾃﾝﾂｷ	CR	VU
			Fimbristylis stauntonii	ﾊﾀｹﾃﾝﾂｷ	CR	EN
			Fimbristylis tashiroana	ﾂｸｼﾃﾝﾂｷ	NT	VU
			Rhynchospora chinensis	ｲﾇﾉﾊﾅﾋｹﾞ	VU	
			Rhynchospora faberi	ｲﾄｲﾇﾉﾊﾅﾋｹﾞ	VU	
			Rhynchospora fujiiana	ｺｲﾇﾉﾊﾅﾋｹﾞ	NT	
			Schoenoplectus gemmifer	ﾊﾀﾍﾞｶﾝｶﾞﾚｲ	EN	VU
			Schoenoplectus mucronatus var. *ishizawae*	ﾛｯｶｸｲ	CR	EN
			Scirpus fuirenoides	ｺﾏﾂｶｻｽｽｷ	CR	
			Scirpus mucronatus	ﾋﾒｶﾝｶﾞﾚｲ	EN	VU
			Scleria caricina	ｶｶﾞｼﾗ	CR	VU
			Scleria levis	ｼﾝｼﾞｭｶﾞﾔ	VU	
			Scleria parvula	ｺｼﾝｼﾞｭｶﾞﾔ	VU	
	Euphorbiaceae	ﾄｳﾀﾞｲｸﾞｻ	*Euphorbia pekinensis*	ｱｿﾀｲｹﾞｷ	NT	EN
	Orchidaceae	ﾗﾝ	*Bulbophyllum drymoglossum*	ﾏﾒﾂﾞﾀﾗﾝ	NT	NT
			Bulbophyllum inconspicuum	ﾑｷﾞﾗﾝ	NT	NT
			Calanthe discolor	ｴﾋﾞﾈ	VU	NT
			Calanthe nipponica	ｷﾝｾｲﾗﾝ	CR	VU
			Calanthe reflexa	ﾅﾂｴﾋﾞﾈ	NT	VU
			Calanthe sieboldii	ｷｴﾋﾞﾈ	EN	EN
			Calanthe tricarinata	ｻﾙﾒﾝｴﾋﾞﾈ	EN	VU
			Cephalanthera erecta	ｷﾞﾝﾗﾝ	NT	
			Cephalanthera falcata	ｷﾝﾗﾝ	NT	VU
			Cymbidium nipponicum	ﾏﾔﾗﾝ	CR	VU
			Cypripedium japonicum	ｸﾏｶﾞｲｿｳ	CR	VU
			Epipactis thunbergii	ｶｷﾗﾝ	NT	
			Gastrodia elata	ｵﾆﾉﾔｶﾞﾗ	EN	
			Gastrodia verrucosa	ｱｷｻﾞｷﾔﾂｼﾛﾗﾝ	VU	
			Habenaria dentata	ﾀﾞｲｻｷﾞｿｳ	CR	EN
			Habenaria radiata	ｻｷﾞｿｳ	VU	NT
			Habenaria sagittifera	ﾐｽﾞﾄﾝﾎﾞ	NT	VU
			Herminium lanceum	ﾑｶｺﾞｿｳ	NT	EN
			Liparis krameri	ｼﾞｶﾞﾊﾞﾁｿｳ	CR	
			Liparis odorata	ｻｻﾊﾞﾗﾝ	CR	EN
			Neofinetia falcata	ﾌｳﾗﾝ	EN	VU
			Oberonia japonica	ﾖｳﾗｸﾗﾝ	VU	
			Orchis graminifolia	ｳﾁｮｳﾗﾝ	EN	VU
			Platanthera hologlottis	ﾐｽﾞﾁﾄﾞﾘ	VU	
			Platanthera japonica	ﾂﾚｻｷﾞｿｳ	NT	
			Platanthera mandarinorum var. *brachycentron*	ﾔﾏｻｷﾞｿｳ	CR	
			Platanthera mandarinorum var. *neglecta*	ﾏｲｻｷﾞｿｳ	CR	
			Platanthera sachalinensis	ｵｵﾔﾏｻｷﾞｿｳ	CR	
			Pogonia japonica	ﾄｷｿｳ	EN	NT
			Pogonia minor	ﾔﾏﾄｷｿｳ	VU	
			Taeniophyllum glandulosum	ｸﾓﾗﾝ	NT	
			Tulotis ussuriensis	ﾄﾝﾎﾞｿｳ	CR	
			Vexillabium nakaianum	ﾊｸｳﾝﾗﾝ	CR	
			Yoania amagiensis	ｷﾊﾞﾅﾉｼｮｳｷﾗﾝ	EN	EN
藻類 Algae	Nostocaceae	ネンジュモ	*Nostoc verrucosum* Vaucher	カワタケ	DD	
	Compsopogonaceae	オオイシソウ	*Compsopogon coeruleus (Balbis) Montagne*	オオイシソウ	VU	VU

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Class 分類	Family 科		Scientific Name 学名	Name 和名	Category カテゴリー	
					Kumamoto 熊本県RDB	Japan 環境省RDB
	Batrachospermaceae		*Batrachospermum arcuatum Kylin*	チャイロカワモズク	NT	NT
		カワモズク	*Batrachospermum helminthosum Bory*	アオカワモズク	NT	NT
	Prasiolaceae	カワノリ	*Prasiola japonica Yatabe*	カワノリ	DD	VU
	Thoreaceae	チスジノリ	*Nemalionopsis tortuosa* Yaneda et Yagi	オキチモズク	CR	CR+EN

ANNEX 4

List of agricultural biodiversity　栽培品種リスト

Class 分類	Items 品目	variety name 品種名	scientific name 学名
米 Rice	水稲 Rice	コシヒカリ ヒノヒカリ あきげしき いただき ミルキークイーン 森のくまさん ひとめぼれ ミネアサヒ	*Oryza sativa sp.*
	水稲（酒米） Rice for brew	五百万石 神力 山田錦 一本〆 レイホウ	
	水稲（もち米） Glutinous rice	峰の雪もち クレナイモチ イワイモチ	
	水稲（古代米） Antiquity	赤米 黒米 紫米	
	稲発酵粗飼料（WCS） Whole crop silage	ミナミユタカ	
麦 Barley	麦 Barley	ニシノホシ はるしずく ミナミノカオリ	*Hordeum vulgare* *Triticum*
穀物類 Grain	とうもろこし Corn	ｽｰﾊﾟｰｽｲｰﾄｷｬﾝﾍﾞﾗ90 ﾊﾞｲｶﾗｰｺｰﾝｶｸﾃﾙ90 ｱﾒﾘｶﾝｽｲｰﾄNo1 ﾊﾆｰﾊﾞﾝﾀﾑﾋﾟｰﾀｰｺｰﾝ 味来390 白もちとうもろこし 黒もちとうもろこし ｺﾞｰﾙﾄﾞﾗｯｼｭ ｺﾞｰﾙﾄﾞﾗｯｼｭ88	*Zea mays*
	そば Buckwheat	阿蘇在来 久木野在来 なつみ	*Fagopyrum esculentum*
	きび Millet	もちきび	*Panicum miliaceum*
豆類 Leguminous	大豆 Soybean	フクユタカ 黒田丸 みさを大豆 丹波黒大豆 早生黒頭巾枝豆	*Glycine max*
	小豆 Azuki bean	小豆	*Vigna angularis*
	落花生 Peanut	落花生 半立性	*Arachis hypogaea*
葉茎菜類 Leaf stalkvegetable	キャベツ Cabbage	彩里 おきな みくに 彩風 新藍 CR月光	*Brassica oleracea*
	白菜 Chinese lettuce	冬峠 晩輝 雪風 きらぼし65	*Brassica rapa L. var. glabra Regel*
	レタス Lettuce	ﾋﾞﾊﾞﾛｯｿ 晩抽ﾋﾞﾊﾞﾍﾞﾙﾃﾞｨ 晩抽ﾏｷｼﾏﾑ ｻﾝﾌﾞﾗｲﾄ	*Lactuca sativa*
	法連草 Spinach	ﾌﾟﾗｲﾏｯｸｽﾐｽﾄﾗﾙ ｸﾞﾘｰﾝﾎｰﾌﾟ 雪美菜	*Spinacia oleracea L.*

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Class 分類	Items 品目	variety name 品種名	scientific name 学名
		寒ちぢみ1号	
		ﾄﾘﾄﾝ	
		ﾄﾗｯﾄﾞ7	
		ｽﾊﾟｲﾀﾞｰ	
		ﾐﾗｰｼﾞｭ	
		ｻﾏｰｽｶｲR7(TSP-413)	
		ｻﾏｰｽﾃｰｼﾞ	
		ｻﾏｰﾄｯﾌﾟｾﾌﾞﾝ	
		ｻﾝﾎｰﾌﾟ7	
		ｴﾘﾅ	
		早生ｻﾗﾀﾞあかり	
		ｸﾞﾗﾅﾀﾞ9	
	ブロッコリー	ｽﾃｨｯｸｾﾆｮｰﾙ	*Brassica oleracea var. italica*
	Broccoli	ﾋﾟｸｾﾙ	
		ﾊｰﾄﾗﾝﾄﾞ	
	アスパラガス	ｳｴﾙｶﾑ	*Asparagus officinalis var. altilis*
	Asparagus		
	葱	雷王	*Allium fistulosum*
	Welsh onion	長宝	
		下仁田	
		冬扇2号	
		龍翔	
		冬扇3号	
	玉葱	ﾀｰﾎﾞ	*Allium cepa*
	Onion	ﾊﾟﾜｰ	
		猩々赤玉葱	
		ｱﾄﾝ	
	ニンニク	嘉定種ﾆﾝﾆｸ	*Allium sativum*
	Garlic	ｽｰﾊﾟｰﾎﾜｲﾄ六片種M	
	ニラ	ﾜﾝﾀﾞｰｸﾞﾘｰﾝﾍﾞﾙﾄﾆﾗ	*Allium tuberosum Rottler*
	Garlic chives	ﾜｲﾄﾞｸﾞﾘｰﾝﾆﾗ	
	チンゲンサイ	青帝	*Brassica rapa* var. *chinensis*
	Qing geng cai	冬賞味	
		夏賞味	
		YN701	
		四季三昧(Y-617)	
	小松菜	はっけい	
	Komatsuna	菜々子	
		黒菜[Kurona]	*Brassica rapa* var. *perviridis*
	水前寺菜	水前寺菜[Suizenjina]	*Gynura bicolor*
	Suizenjina		
	紫蘇	赤ちりめんしそ	*Perilla frutescens var. crispa*
	Red shiso		
	ゴマ	白ごま	*Sesamum indicum*
	Sesame		
	水菜	ｼｬｷさら	*Brassica rapa* var. *nipposinica*
	Potherb Mustard	京しぐれ	
		からしみず菜(青)	
	ルッコラ	ﾜｲﾙﾄﾞﾛｹｯﾄ	*Eruca vesicaria*
	Arugula		
	漬け菜	阿蘇高菜[Aso-takana]	*Brassica campestris*
	Greens for pickling	はまみなとべかな	*Brassica campestris*
		野沢菜	
		ｻﾗﾀﾞからし菜	
		赤からし水菜	
	マコモタケ	ﾏｺﾓﾀｹ	*Zizania latifolia*
	Makomotake		
	ケール	青汁用ｹｰﾙ(ﾎﾟﾙﾄｶﾞﾙ)	*Brassica oleracea* var. *acephala*
	Kehl		
	ベビーリーフ	ﾙｯｺﾗ	*Eruca vesicaria*
	Baby leaf	ﾍﾞﾋﾞｰﾘｰﾌﾚｯﾄﾞｹｰﾙ	*Brassica oleracea* var. *acephala*
		ｸﾞﾘｰﾝｽﾋﾟﾅｯﾁ	*Spinacia oleracea L.*
		ﾀｰｻｲ	*Brassica chinensis var. rosularis*
		ｽｲｽﾁｬｰﾄﾞ	*Beta vulgaris* var. *cicla*
		ｸﾞﾘｰﾝﾏｽﾀｰﾄﾞ	*Brassica juncea mustard green*
		早生ﾐｽﾞﾅ	*Brassica rapa* var. *nipposinica*

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Class 分類	Items 品目	variety name 品種名	scientific name 学名
		ｺｰﾗﾙﾘｰﾌ ﾌｪｻﾞｰ	*Brassica campestris*
		ｺｰﾗﾙﾘｰﾌ ﾌﾟﾙｰﾑ	*Brassica campestris*
果菜類 Fruits and vegetables	イチゴ Strawberry	とよのか	*Fragaria × ananassa*
		紅ほっぺ	
		ｱｽｶﾙﾋﾞｰ	
		さがほのか	
	西瓜 Watermelon	富士光	*Citrullus lanatus*
		縞無双H	
		色見すいか	
	きゅうり Cucumber	地きゅうり[Jikyuri]	*Cucumis sativus*
	メロン Melon	秋･肥後ｸﾞﾘｰﾝ(M-GBK)	*Cucumis melo*
		ｸﾞﾗﾃﾞｰｼｮﾝ	
		ｱｰﾙｽｾｲﾇ夏2	
		ｱｰﾙｽｾｲﾇ春2	
		ｱｰﾙｽ雅夏系	
		ﾍﾞﾈﾁｱ夏2	
		ﾍﾞﾈﾁｱ秋冬1	
	南瓜 Pumpkin	つるなしやっこ	*Cucurbita moschata*
		えびす	
		ｽﾞｯｷｰﾆﾀﾞｲﾅｰ	
		打木早生赤栗	
		夢味	
		万次郎	
	トマト Tomato	ｼｼﾘｱﾝﾙｰｼﾞｭ	*Solanum lycopersicum*
		りんか409	
		ﾄｽｶｰﾅﾊﾞｲｵﾚｯﾄ	
		サンチェリーピュア	
		キャロルクイーン	
		がんばる根ﾄﾘﾌﾟﾙ	
	茄子 Eggplant	庄屋大長	*Solanum melongena*
		ﾋｺﾞﾑﾗｻｷ	
	ピーマン Pepper	あきの	*Capsicum annuum var. grossum*
		サララ	
		京まつり	
		かがやき	
		ｼﾞｬﾝﾎﾞｶﾗｰﾋﾟｰﾏﾝｵﾚﾝｼﾞ	
		ｼﾞｬﾝﾎﾞｶﾗｰﾋﾟｰﾏﾝ紫	
		ｼﾞｬﾝﾎﾞｶﾗｰﾋﾟｰﾏﾝ黄	
		ｼﾞｬﾝﾎﾞｶﾗｰﾋﾟｰﾏﾝ赤	
		東京ししとう	*Capsicum annuum var. angulosum*
根菜類 Root crops	大根 Japanese Radish	おしん	*Raphanus sativus var. longipinnatus*
		ﾚｯﾄﾞﾁｬｲﾑ二十日大根	
		くろ長君	
		夢誉(MK-R711)	
		ほほべに丸廿日	
		夏みどり8号	
		夏つかさ	
		ﾌﾚﾝﾁ二十日大根	
		ﾎﾜｲﾄﾐﾆ二十日大根	
	人参 Carrot	黒田五寸	*Daucus carota*
	ショウガ Ginger	大しょうが	*Zingiber officinale*
いも類 Potatoes	さつまいも Sweet potatoes	中早生二号	*Ipomoea batatas*
		ﾏﾙｼｪ	
		彩里	
		秋徳SP	
		YR銀次郎	
		超大球	
		紅あずま	
		ｸｨｯｸｽｲｰﾄ	
		高系VT	
		ﾍﾞﾆﾊﾙｶ	
		鳴門金時98K	
		金時06NK	

ANNEX 4

Class 分類	Items 品目	variety name 品種名	scientific name 学名
	里芋	ﾊｽﾊﾞ	*Colocasia esculenta*
	Taro	あかどいも[Akado-imo]	*Colocasia esculenta*
		鶴の子いも[Tsurunoko-imo]	*Colocasia esculenta*
	こんにゃく芋	あかぎおおだま	*Amorphophallus konjac*
	Konjac potatoes	在来種	
花	トルコキキョウ	爽涼	*Eustoma grandiflorum*
Flowers	Texas Bluebell	天女の羽衣	
		ﾌﾟﾗﾁﾅﾊﾞｲｵﾚｯﾄ	
		ﾆｭｰｽﾓｰﾙﾊﾞｲｵﾚｯﾄ	
		ｴｰｽﾎﾜｲﾄ(ﾐ)	
		ｾﾚﾓﾆｰﾌﾞﾙｰﾌﾗｯｼｭ	
		ｱｸﾛﾎﾟﾘｽﾎﾜｲﾄ	
		ｽｰﾊﾟｰﾌﾟﾘﾏﾋﾟﾝｸ	
		ﾋﾟｯｺﾛｰｻｽﾉｰ	
		ﾀﾞｲﾔﾓﾝﾄﾞﾋﾟｰﾁ	
		ﾘﾈｰｼｮﾝﾋﾟﾝｸﾋﾟｺﾃｨ	
		北斗星	
		ｴｸﾛｰｻﾘﾗ	
		ｴｸｾﾙﾈｲﾋﾞｰﾘﾝｸﾞ	
		F1はるか	
		ｾﾚﾓﾆｰｵﾚﾝｼﾞﾌﾗｯｼｭ	
		ｾﾚﾓﾆｰﾗｲﾄﾋﾟﾝｸ	
		ﾓﾚｯﾄﾏﾘﾝ	
		ﾊﾟﾋﾟｵﾝﾛｰｽﾞﾋﾟﾝｸ	
		ﾎﾞﾚﾛﾎﾜｲﾄ	
		ｻﾙｻﾏﾘﾝ	
		ﾛｼﾞｰﾅﾋﾟﾝｸﾋﾟｺﾃｨ	
		ﾛｼﾞｰﾅ3型ﾋﾟﾝｸﾌﾗｯｼｭ	
		ﾛｼﾞｰﾅⅢ型ﾋﾟﾝｸ	
		ﾛｼﾞｰﾅⅢ型ﾌﾞﾙｰ	
		ﾛｼﾞｰﾅﾌﾞﾙｰver.2	
		ｼｭｰｸﾘｰﾑ	
		海ほのか	
		ｱﾎﾟﾛｻｰﾌ	
		雪てまり	
		ﾊﾟﾚｵﾋﾟﾝｸ	
		ﾊﾟﾚｵｼｬﾝﾊﾟﾝ	
		ﾌｧｲﾅﾙﾛｰｽﾞ	
		ﾊﾞﾙｶﾝﾏﾘﾝ	
		ﾊﾞﾙｶﾝﾘｯﾌﾟｽ	
		ｽｰﾊﾟｰﾏｼﾞｯｸﾗﾍﾞﾝﾀﾞｰ	
		ﾊﾟﾚｵｺﾞｰﾙﾄﾞ	
		ﾊﾟﾚｵﾋﾟﾝｸﾌﾗｯｼｭ	
		ﾋﾟｯｺﾛｰｻｸﾞﾘｰﾝver.2	
		ｲｴﾛｰﾀﾞﾝｽ	
		ﾌｧｲﾅﾙﾎﾜｲﾄ	
		ｼﾙｸﾗﾍﾞﾝﾀﾞｰ	
		ｾｼﾙﾋﾟﾝｸME(ﾌｪﾘｽﾋﾟﾝｸ)	
		ﾏｼｭﾏﾛﾋﾟﾝｸ	
		ﾏｼｭﾏﾛﾎﾜｲﾄ	
		ﾌﾞｰｹﾎﾜｲﾄ(MEX4118)	
		ﾛｼﾞｰﾅﾋﾟﾝｸ	
		ｴｸﾚｱ(ﾑｰｽｼﾘｰｽﾞ)	
		ﾗﾌﾞﾐｰﾃﾝﾀﾞｰ	
		ﾛﾍﾞﾗｸﾞﾘｰﾝ	
		ﾛﾍﾞﾗﾋﾟﾝｸ(ﾗｲﾄﾋﾟﾝｸ)	
		ﾛﾍﾞﾗｲｴﾛｰ	
		ﾀﾞﾌﾞﾙﾃｨﾗﾐｽ	
		ﾊﾟﾚｵｵｰﾀﾑﾋﾟﾝｸ	
		ﾛｼﾞｰﾅﾗﾍﾞﾝﾀﾞｰ	
		ﾛｼﾞｰﾅｽﾉｰ	
		ﾛｼﾞｰﾅﾌﾞﾙｰﾌﾗｯｼｭ	
		ﾛｼﾞｰﾅﾋﾟﾝｸﾌﾗｯｼｭver.2	
		ﾛｼﾞｰﾅﾗｲﾑ	
		ｱﾝﾊﾞｰﾀﾞﾌﾞﾙﾏﾛﾝ	
		ｱﾝﾊﾞｰﾀﾞﾌﾞﾙﾜｲﾝ	

ANNEX 4

Class 分類	Items 品目	variety name 品種名	scientific name 学名
		キキ ラブミーブルーピコティ アンバーダブルミント エコーレピンク エコーレブルー 凛 アンジェリーナブルーピコティ セレモニーピンクフラッシュ ボレロマリン セシルブルーML アンジェリーナピンクピコティ クラリスピンク(SM5-556) パレオアプリコット パレオグリーン ミンク(TU565) なみだ(TU566) ラ・フォリア(TU560) ボヤージュⅡ型グリーン ボヤージュⅡ型イエロー ボヤージュⅠ型ホワイト エスプリピンク アルベールホワイト スーパーマジックホワイト レイナホワイト(SM6-792) マリーナアプリコット マリーナブルーフラッシュ マリーナライトピンク マリアホワイト 桜みちる ジュエリーピンクフラッシュ ジュエリースノー ブランシュール エレガンスホワイト エンゲージホワイト エンゲージブルーフラッシュ エンゲージピンク EVKD-04 小夏ブルーフラッシュ ボヤージュ1型ピンク ボヤージュ1型アプリコット ボヤージュ1型グリーン ボヤージュ2型ブルー ボヤージュ2型ライトアプリコット コレゾピンク コレゾライトピンク プレシア サフィナブルーパステル コレゾローサ(K242) アンリ ハーレスピンク サフィナピンク2 セルジュハート エグゼホワイト フランソワ パティオブルー パティオホワイト セレブピンク セレブプリンセス アンバーグリーンリップ エグゼラベンター ファルダチェリー ファルダレモン ファルダマンゴー ヴィンテージマリン ロザリオグリーン ジャスニーホワイト	

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Class 分類	Items 品目	variety name 品種名	scientific name 学名
		ルーセントホワイト	
		マーブルピンク	
		ジュエリーチェリーフラッシュ	
		ジュエリーライラック	
		クインオブナイト	
		ラフールグリーン(F07-915)	
		パティオスノー(F08-909)	
		パティオブルーフラッシュ(F08-615)	
		パティオピンクフラッシュ(F08-616)	
		パティオイエロー	
		愛ほのか(F07-901)	
		モナークブルーフラッシュ	
		レイシーピンク	
		ラフールイエロー	
		ロージーミックス	
		カルメンミックス	
		フィリアラベンター	
		フィリアオーキッド	
		グラナスライトピンク	
		オーブピンクフラッシュ	
		オーブカクテル	
		キュアブルー	
		ホイップホワイト	
		ホイップグリーン	
		ファンシーブルー	
		ピーチパフェ	
		アラモード	
		プチハートホワイト	
		プチハートブルー	
		F09-956	
		グランブルー	
		F09-566	
		チロルブルーフラッシュ	
		EYD-02(黄色)	
	ストック	雪波	*Matthiola incana*
	Garden stock	朝波	
		イエロードルセ	
		マリーブルー	
		クリスマスルビー	
		ホワイトワンダー2号	
		スノーワンダー	
		チェリーカルテット	
		ピンクカルテット	
		ホワイトカルテット	
		イエローカルテットⅡ	
		ローズカルテット	
		イエローアイアン	
		ピンクアイアン	
		波の舞	
		アプリコットカルテット2	
		ハロウィンイエロー	
		マリンカルテット	
		パープルカルテット	
		ホワイトアイアン	
		アプリコットアイアン	
		イエロースパーク	
		ホワイトスパーク	
		ラブミーローズ	
		パープルアイアン	
		ディープローズカルテット	
		チェリーアイアン	
		ローズピンクアイアン	
		ピーチカルテット	
		マリンアイアン	
		イエロービーチ	
		マリンフラッシュカルテット	

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Class 分類	Items 品目	variety name 品種名	scientific name 学名
		ﾗｲﾄﾋﾟﾝｸﾌﾗｯｼｭｶﾙﾃｯﾄ	
		ﾚｲﾝﾎﾞｰｶﾙﾃｯﾄ	
		ﾃﾞｨｰﾌﾟｲｴﾛｰｱｲｱﾝ	
		ﾗｲﾄﾋﾟﾝｸﾌﾗｯｼｭｶﾙﾃｯﾄ(鑑別名人)	
	パンジー	LRﾌﾟﾘﾝ	*Viola X wittrockiana*
	Pansy	ｱﾘﾙﾚｯﾄﾞver.2	
		ｱﾘﾙｲｴﾛｰver2	
		ｱﾘﾙｸﾘｱｲｴﾛｰ	
		ｱﾘﾙｸﾘｱｽｶｰﾚｯﾄ	
		ｱﾘﾙｸﾘｱｵﾚﾝｼﾞ	
		ｱﾘﾙｸﾘｱﾗｲﾄﾌﾞﾙｰ	
		ｱﾘﾙﾛｰｽﾞﾋﾞｰｺﾝ	
		ｱﾘﾙﾃﾞｨｰﾌﾟﾌﾞﾙｰ	
		ｱﾘﾙﾚｯﾄﾞ&ｲｴﾛｰver.2	
		LRｲﾁｺﾞｼｮｰﾄ	
		ｱﾘﾙﾊﾞﾚﾘｰﾅ	
		ﾌﾟﾛﾝﾄﾐｯｸｽ	
		ﾋﾟｶｿｲｴﾛｰﾌﾞﾛｯﾁ	
		ﾋﾟｶｿｸﾘｱｲｴﾛｰ	
		ﾋﾟｶｿｵﾚﾝｼﾞﾌﾞﾛｯﾁ	
		ﾋﾟｶｿｸﾘｱｵﾚﾝｼﾞ	
		ﾋﾟｶｿﾋﾟﾝｸｼｪｰﾄﾞ	
		ﾋﾟｶｿﾚｯﾄﾞﾌﾞﾛｯﾁ	
		ﾋﾟｶｿﾌﾞﾙｰﾌﾞﾛｯﾁ	
		ﾋﾟｶｿｸﾘｱﾗｲﾄﾌﾞﾙｰ	
		ﾋﾟｶｿｱﾌﾟﾘｺｯﾄｼｪｰﾄﾞ	
		ﾋﾟｶｿﾚｯﾄﾞ&ｲｴﾛｰﾌﾞﾛｯﾁ	
		ﾋﾟｶｿﾗｲﾄﾌﾞﾙｰﾌｪｲｽ	
		ﾋﾟｶｿﾛｰｽﾞﾌﾞﾛｯﾁ	
	ビオラ	ﾌﾞﾙｰｽﾜｰﾙ	
	Viola	ﾌﾙｰﾅﾚｯﾄﾞﾌﾞﾛｯﾁ	
		ﾌﾙｰﾅﾗｲﾄﾌﾞﾙｰ	
		ﾌﾙｰﾅｵﾚﾝｼﾞ	
		ﾌﾙｰﾅｲｴﾛｰ	
		ﾌﾙｰﾅﾗﾍﾞﾝﾀﾞｰﾋﾟﾝｸ	
		ﾌﾙｰﾅﾊﾟｰﾌﾟﾙ&ｲｴﾛｰ	
		ﾍﾟﾆｰｵﾚﾝｼﾞｼﾞｬﾝﾌﾟｱｯﾌﾟ	
		ﾌﾙｰﾅﾊﾟｰﾌﾟﾙﾌｪｲｽ	
	グラジオラス	富士の雪	*Gladiolus spp*
	Gladiolus	ﾊﾝﾃｨﾝｸﾞｿﾝｸﾞ	
		ﾌﾟﾘﾝｾｽﾏｰｶﾞﾚｯﾄﾛｰｽﾞ	
		ﾄﾗﾍﾞﾗ	
		ｸﾞﾘｰﾝｱｲﾙ	
		ﾌﾚﾝﾄﾞｼｯﾌﾟ	
		ﾎﾜｲﾄﾌﾚﾝﾄﾞｼｯﾌﾟ	
		ﾋﾟﾝｸﾚﾃﾞｨ(輸入)	
		ｸﾞﾘｰﾝｽﾀｰ	
		ﾄｯﾌﾟｼｰｸﾚｯﾄ	
		ｴｯｾﾝｼｬﾙ	
		ﾌﾞﾙｰｽ	
		ﾏｽｶｰﾆ	
		さくらこ	
		ｽﾋﾟｯｸｱﾝﾄﾞｽﾊﾟﾝ	
		ｸﾞﾗﾝﾌﾟﾘ	
		ﾌﾚﾎﾞｴｸﾘﾌﾟｽ	
		ｱｰﾘｰﾀｲﾑｽ	
		ｼﾞｪｼｶ	
		ﾊﾟﾙﾁﾁｭｰﾙ	
		ﾋﾞﾊﾞﾘｱﾝ	
		ﾃﾞｨｰﾍﾟｽﾄﾚｯﾄﾞ	
		ｱﾄﾞﾚﾅﾘﾝ	
		彩姫	
		ｼﾞｬｸｿﾝﾋﾞﾙｺﾞｰﾙﾄﾞ	
		ﾍﾞｶﾞ	
		ｺｽﾀ	
		ｵｱｼｽ	

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Class 分類	Items 品目	variety name 品種名	scientific name 学名
		ｶﾞﾘﾚｲ	
		ｼﾏﾛｰｻ	
		ｴｯｾﾝｼｬﾙ	
		ﾌﾟﾘﾝｾｽﾏｰｶﾞﾚｯﾄﾛｰｽﾞ	
	ラナンキュラス	ﾄﾞﾘｰﾏｰﾛｰｽﾞﾋﾟﾝｸ	*Ranunculus asiaticus*
	Ranunculus	ﾄﾞﾘｰﾏｰﾎﾜｲﾄ	
		ﾄﾞﾘｰﾏｰﾊﾞｲｶﾗｰﾐｯｸｽ	
		ｴﾚｶﾞﾝｽﾗｲﾄﾋﾟﾝｸL	
		ｴﾚｶﾞﾝｽﾎﾜｲﾄL	
		ﾄｩｰﾙ	
	ペチュニア	ﾊﾞｶﾗ特選混合	*Petunia* x *hybrida*
	Petunia	ﾏﾝﾎﾞﾌﾞﾙｰ	
		ﾏﾝﾎﾞﾎﾜｲﾄ	
		ﾏﾝﾎﾞﾊﾞｲｵﾚｯﾄ	
		ﾏﾝﾎﾞﾚｯﾄﾞ	
		ﾏﾝﾎﾞﾋﾟﾝｸﾓｰﾝ	
		ﾏﾝﾎﾞﾛｰｽﾞ	
		ﾏﾝﾎﾞﾊﾞｰｶﾞﾝﾃﾞｨ	
		ﾏﾝﾎﾞﾋﾟｰﾁ	
	ベゴニア	ｱﾝﾊﾞｻﾀﾞｰｽｶｰﾚｯﾄ	*Begonia*
	Begonia	ｱﾝﾊﾞｻﾀﾞｰﾎﾜｲﾄ	
		ｱﾝﾊﾞｻﾀﾞｰﾋﾟﾝｸ	
	コスモス	ｾﾝｾｰｼｮﾝﾐｯｸｽ	*Cosmos Cav*
	Cosmos		
	アスター	ﾐｽﾖｰﾛｯﾊﾟﾚｼﾞｽﾄ	*Callistephus chinensis*
	Astor	ｽﾃﾗﾚｯﾄﾞ	
		ｽﾃﾗﾛｰｽﾞ	
		ﾈﾈﾛｰｽﾞﾌﾛｽﾄ	
		ｼｴﾅｶｰﾏｲﾝﾚｯﾄﾞ	
		ｼｴﾅﾋﾟﾝｸ	
		ﾅﾅｻｰﾓﾝﾋﾟﾝｸ	
		ﾅﾅｶｰﾏｲﾝﾛｰｽﾞ	
		ｼｬｷﾞｰｲｴﾛｰ	
		ｼｬｷﾞｰﾋﾟﾝｸﾌﾗｯｼｭ	
		ｼｬｷﾞｰﾃﾞｨｰﾌﾟﾌﾞﾙｰ	
		ｼｬｷﾞｰﾃﾞｨｰﾌﾟﾛｰｽﾞ	
	なでしこ	ﾃﾙｽﾀｰﾋﾟｺﾃｨ	*Dianthus superbus L. var. longicalycinus*
	Pink	ﾃﾙｽﾀｰﾊﾟｰﾌﾟﾙﾋﾟｺﾃｨ	
		ﾃﾙｽﾀｰﾋﾟﾝｸ	
		ﾃﾙｽﾀｰｵｰｷｯﾄﾞ	
		ﾃﾙｽﾀｰﾎﾜｲﾄ	
		ﾃﾙｽﾀｰｽｶｰﾚｯﾄ	
		ﾀﾞｲｱﾝｻｽ　ﾅｯﾋﾟｰ	
		ﾌｫﾄﾝﾎﾜｲﾄ	
		ﾌｫﾄﾝﾛｰｽﾞ	
	セキチク	ｽﾉｰﾌｧｲﾔ	*Dianthus chinensis L*
	China pink	ｽﾉｰｶｰﾍﾟｯﾄ	
		ﾛｰｽﾞｶｰﾍﾟｯﾄ	
		ｵﾘｴﾝﾀﾙｶｰﾍﾟｯﾄ	
		ﾌｧｲﾔｰｶｰﾍﾟｯﾄ	
		ｸﾘﾑｿﾝｶｰﾍﾟｯﾄ	
	デルフィニューム	ｵｰﾛﾗﾌﾞﾙｰｲﾝﾌﾟ	*Delphinium*
	Delphinium	ﾌﾟﾃﾞﾙﾌﾞﾙｰ	
		ﾌﾟﾃﾞﾙｼｪﾙﾋﾟﾝｸ	
		ﾌﾟﾚｽﾄﾝﾌﾞﾙｰ	
		ｵｰﾛﾗﾗｲﾄﾌﾞﾙｰ	
		F1ｽｰﾊﾟｰﾏﾘﾝﾌﾞﾙｰ	
		ｽｰﾊﾟｰｽｶｲﾌﾞﾙｰ	
	ひまわり	ﾊｲﾌﾞﾘｯﾄﾞｻﾝﾌﾗﾜｰ	*Helianthus annuus*
	Sunflower	ｻﾏｰｻﾝﾘｯﾁﾊﾟｲﾝ45	
		ｻﾝﾘｯﾁﾏﾝｺﾞｰ50	
		ｻﾏｰｻﾝﾘｯﾁﾚﾓﾝ45	
		ｻﾝﾘｯﾁｵﾚﾝｼﾞ50	
		ｻﾝﾘｯﾁﾚﾓﾝ50	
		ﾋﾞﾝｾﾝﾄ2型ｸﾘｱｵﾚﾝｼﾞ	
	マリーゴールド	ﾘﾄﾙﾋｰﾛｰｴﾛｰ	*Tagetes*

ANNEX 4

Class 分類	Items 品目	variety name 品種名	scientific name 学名
	Marigold	ﾏｰﾁ特選混合	
		ﾊﾟｰﾌｴｸｼｮﾝ特選混合	
		ﾎﾞﾅﾝｻﾞｲｴﾛｰ	
		ﾎﾞﾅﾝｻﾞｵﾚﾝｼﾞ	
		ｻﾌｧﾘｽｶｰﾚｯﾄ	
		ﾊﾟｰﾌｪｸｼｮﾝｲｴﾛｰ	
	サルビア	ﾎｯﾄｼﾞｬｽﾞ	*Salvia*
	Sage	ﾋﾞｸﾄﾘｱﾌﾞﾙｰ	
		ﾌﾗﾒｯｸｽ2000	
		ﾘﾄﾙﾀﾝｺﾞ	
	紅花	ｶﾙﾀﾑｽ 橙赤色丸葉種	*Carthamus tinctorius*
	Safflower		
	菊	ﾉｰｽﾎﾟｰﾙ	*Chrysanthemum × morifolium* Ramat
	Chrysanthemum	段菊	
		ﾏﾄﾘｶﾘｱ ｸﾗｳﾝﾎﾜｲﾄ	
		ﾏﾄﾘｶﾘｱ ｺﾞｰﾙﾄﾞﾎﾞｰﾙ	
	デイジー	LRｱｰﾘｰﾎﾟﾝﾎﾟﾈｯﾄﾎﾜｲﾄ	*Bellis perennis*
	Daisy	LRｱｰﾘｰﾎﾟﾝﾎﾟﾈｯﾄﾛｰｽﾞ	
		ﾄﾞﾜｰﾌｶｸﾃﾙﾐｯｸｽ	
	矢車草	ｾﾝﾄｰﾚｱ ｲｴﾛｰｻﾙﾀﾝ	*Rodgersia podophylla*
	Centaurea	寒咲八重矢車草 ﾌﾟﾘﾝｾｽ	
	ルドベキア	ﾛｰﾗﾝﾄﾞﾐｯｸｽ	*Rudbeckia*
	Rudbeckia		
	メランポジューム	ﾐﾘｵﾝｺﾞｰﾙﾄﾞ	*Melampodium paludosum*
	Melampodium	ﾀﾞｰﾋﾞｰｴﾛｰ	
		ﾀﾞｰﾋﾞｰ	
	アゲラタム	ﾄｯﾌﾟﾌﾞﾙｰ	*Ageratum*
	Ageratum	ﾌﾞﾙｰﾊﾜｲ	
	アリッサム	ｽﾉｰｸﾘｽﾀﾙ	*Lobularia maritima*
	Lobularia	ｲｰｽﾀｰﾎﾞﾈｯﾄﾃﾞｨｰﾌﾟﾛｰｽﾞ	
		ｲｰｽﾀｰﾎﾞﾈｯﾄﾃﾞｨｰﾌﾟﾋﾟﾝｸ	
		ﾜﾝﾀﾞｰﾗﾝﾄﾞﾃﾞｨｰﾌﾟﾊﾟｰﾌﾟﾙ	
	キンレンカ	ﾎﾜｲﾘｰﾊﾞｰﾄﾞｽｶｰﾚｯﾄ	*Tropaeolum majus L*
	Nasturtium	ﾎﾜｲﾘｰﾊﾞｰﾄﾞｺﾞｰﾙﾄﾞ	
	クレオメ	ｶﾗｰﾌｧﾝﾃﾝ	*Cleome hassleriana*
	Cleome		
	インパチェンス	ｽｰﾊﾟｰｴﾙﾌｨﾝ混合	*Impatiens walleriana*
	Impatiens		
	ブプレウラム	ｸﾞﾘﾌﾃｨ	*Bupleurum rotundifolium*
	Bupleurum	ｸﾞﾘﾌﾃｨ晩生種	
	花綿	切り花用高性種	*Gossypium arboreum*
	Cotton		
	マツバボタン	ｿｰﾗｰｷｯｽﾞ特選混合	*Portulaca grandiflora*
	Portulaca		
	ニチニチソウ	ﾋﾞﾝｶ ﾀｲﾀﾝﾐｯｸｽ	*Catharanthus roseus*
	Catharanthus	ﾋﾞﾝｶ ｴｸｴｲﾀｰﾗﾝﾄﾞ(ﾐｯｸｽ)	
	ラベンダー	ﾚｰｽﾗﾍﾞﾝﾀﾞｰｽﾊﾟﾆｯｼｭｱｲｽﾞ	*Lavandula multifida*
	Lavender		
	アマランサス	ﾄﾘｶﾗｰﾊﾟｰﾌｪｸﾀ	*Amaranthus tricolor*
	Amaranth		
	アーティチョーク	ｸﾞﾘｰﾝｸﾞﾛｰﾌﾞ	*Cynara scolymus*
	Artichoke		
	シレネ	ｽﾀｰﾘｰﾄﾞﾘｰﾑ	*Silene pendula*
	Silene	ｾﾘﾅ	
	シネラリア	ｱｰﾘｰﾊﾟｰﾌｪｸｼｮﾝﾛｰｽﾞ	*Pericallis x hybrida*
	Pericallis		
	葉牡丹	つぐみ	*Brassica oleracea*
	Kale		
	きんせんか	ｵﾚﾝｼﾞﾌﾟﾗｲﾄﾞ	*Calendula officinalis*
	Calendula		
	けいとう	ｾﾛｼｱ ﾙﾋﾞｰﾊﾟﾌｪ	*Celosia argentea*
	Cockscomb		
	水仙	ｶﾞｰﾃﾞﾝｼﾞｬｲｱﾝﾄ	*Narcissus tazetta var. chinensis*
	Narcissus		
	かすみ草	ﾏﾘｰﾍﾞｰﾙ(FG420)	*Gypsophila elegans*
	Gypsophila		

ANNEX 4

Class 分類	Items 品目	variety name 品種名	scientific name 学名
牧草 Pasture	デントコーン Corn	ｽﾉｰﾃﾞﾝﾄ125わかば ｽﾉｰﾃﾞﾝﾄ 王夏	*Zea mays var. indentata*
	ソルゴー Sorghum	ｿﾙｶﾞﾑｺﾓﾝ 高糖分 風立 三尺	*Sorghum bicolor*
	ヒエ Japanese millet	ｸﾞﾘｰﾝﾐﾚｯﾄ 中生 青葉ﾐﾚｯﾄ ｲﾀﾘｱﾝﾐﾚｯﾄR 夏ｲﾀﾘｱﾝ	*Echinochloa esculenta*
	スーダングラス Sudan grass	ﾍｲｽｰﾀﾞﾝ うまかろーる ｼｭｶﾞｰｽﾘﾑ	*Sorghum sudanense*
	イタリアングラス Italian grass	ｺﾓﾝ ﾜｾｱｵﾊﾞ ﾜｾﾕﾀｶ ﾀﾁﾜｾ ﾏﾝﾓｽB ﾀﾁﾏｻﾘ ﾀﾁﾑｼｬ ﾊﾅﾐﾜｾ ｲﾅｽﾞﾏ 得々ﾌﾞﾚﾝﾄﾞ	*Lolium multiflorum Lam*
	えん麦 Oat	ﾍｲｵｰﾂ ｽｰﾊﾟｰﾊﾔﾃ隼 ﾆｭｰｵｰﾙﾏｲﾃｨ 緑肥用ｴﾝﾊﾞｸ	*Avena sativa*
	クローバー Clover	白ｸﾛｰﾊﾞｰ ｺﾓﾝ ｸﾘﾑｿﾝｸﾛｰﾊﾞｰ ｸﾘﾑｿﾝｸﾛｰﾊﾞｰ くれない 赤ｸﾛｰﾊﾞｰﾏｷﾐﾄﾞﾘ	*Trifolium repens*
	other pastures	ﾈﾏｺﾛﾘ	*Crotalaria spectabilis Roth*
	other pastures	れんげ草	*Astragalus sinicus*
	other pastures	緑肥用からしな	*Brassica campestris*
	other pastures	ｷｶﾗｼ	*Sinapis alba L.*
	other pastures	ｵｰﾁｬｰﾄﾞ ｺﾓﾝ	*Dactylis glomerata*
	other pastures	ｵｰﾁｬｰﾄﾞ ﾅﾂﾐﾄﾞﾘ	*Dactylis glomerata*
	other pastures	ｹﾝﾀｯｷｰﾌﾞﾙｰｸﾞﾗｽ	*Poa pratensis*
	other pastures	ﾃｵｼﾝﾄ	*Zea mays subsp. mexicana*
	other pastures	ﾁﾓｼｰ	*Phleum pratense*
	other pastures	ﾘｰﾄﾞｶﾅﾘｰｸﾞﾗｽ ﾊﾟﾗﾄﾝ(ﾀｷｲ)	*Phalaris arundinacea*
	other pastures	ﾄｰﾙﾌｪｽｸ ｻｻﾞﾝｸﾛｽ	*Festuca arundinacea Schreb*
	other pastures	ﾁﾓｼｰ ｸﾝﾌﾟｳ	*Phleum pratense*
	other pastures	ﾄｰﾙﾌｪｽｸ ｺﾓﾝ	*Festuca arundinacea Schreb*
	other pastures	ﾘｰﾄﾞｶﾅﾘｰｸﾞﾗｽ ｺﾓﾝ	*Phalaris arundinacea*
	other pastures	ｱﾙﾌｧﾙﾌｧ ｹﾚｽ	*Medicago sativa*
	other pastures	ペレニアルライグラス	*Lolium perenne*
茶 Tea	茶 Tea	やぶきた かなやみどり おくみどり やぶきた実生	*Camellia sinensis (L.) Kuntze*
果実類 Fruit tree	クリ Japanese chestnut	丹沢 伊吹 筑波 利平 ぽろたん	*Castanea crenata*
	ウメ Plum	玉英 南高	*Prunus mume*
	キウイ Kiwifruit	ヘイワード	*Actinidia deliciosa*
	リンゴ Apple	フジ	*Malus pumila*
	ブルーベリー Blueberry	チャンドラー サンシャインブルー サミット オザークブルー	*Vaccinium corymbosum*

ANNEX 4

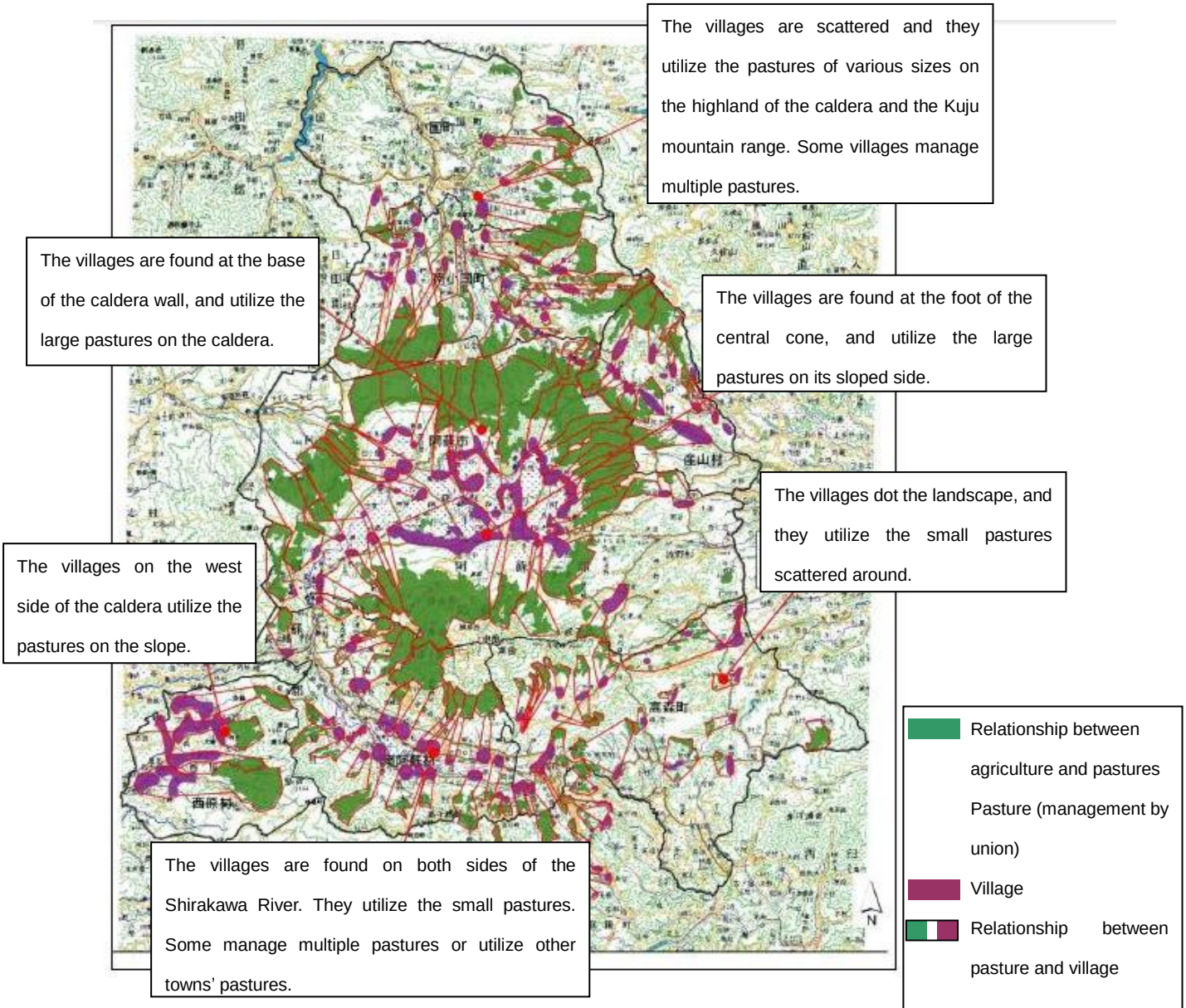
Class 分類	Items 品目	variety name 品種名	scientific name 学名
		エリザベス	
		レガシー	
	ブラックベリー	マートンソーレース	*Rubus fruticosus*
	Blackberry	ボイソンベリー	
	ラズベリー	インディアンサマー	*Rubus idaeus*
	Raspberry		
	ユズ	木頭（キトウ）	*Citrus junos*
	Citron		
	ナシ	新高	*Pyrus pyrifolia*
	Nashi pear	幸水	
		豊水	
		新興	
	ブドウ	巨峰	*Vitis spp*
	Grape	高墨	
	モモ	川中島白桃	*Amygdalus persica*
	Peach	あかつき	
		長沢白鳳	
	スモモ	ソルダム	*Prunus salicina*
	Plum	大石早生	
		ハニーローザ	
		太陽	
	カキ	太秋	*Diospyros kaki*
	Persimmon	早秋	
		富有	
きのこ類	アラゲキクラゲ	89号	*Auricularia polytricha*
Mushroom	Cloud ear		
	エリンギ	KX-EG109	*Pleurotus eryngii*
	Eryngii		
	シイタケ	908号	*Lentinula edodes*
	Shitake	与一丸	
		与さぶろう	
		一森一	
		こう太郎	
		新908号	
		にく丸	
		森XRI1号	
		もりの秋実	
		もりの春光	
		もりのだい次郎	
		もりの夏実	
		もりの早夏	
		もりの春太	
		ゆう次郎	
		優実	
		凛凛	
		ロング115号	
		ロング193号	
		ロング240号	
		ロング327号	
		ロング697号	
	トウチュウカソウ	サナギタケ	*Cordyceps militaris (Vuill.) Fr.*
	Plant worm		
	ナメコ	1号	*Pholiota nameko*
	Predacecus diving beetle	2号	
		3号	
		NW	
		ロング早生ナメコ	
	other mushrooms	ハチク	*Phyllostachys nigra var. henonis*
	other mushrooms	39号	*Pleurotus ostreatus*
	other mushrooms	KX-BS022	*Hypsizygus marmoreus*
	other mushrooms	51号	*Grifola frondosa Fries*
	other mushrooms	ヤマブシタケ	*Hericium erinaceum*
	other mushrooms	マンネンタケ	*Ganoderma lucidum*
その他	ホテイチク	ホテイチク	*Phyllostachys aurea*
Others	マダケ	マダケ	
	モウソウチク	モウソウチク	*Phyllostachys heterocycla f. pubescens*

ANNEX 4

Class 分類	Items 品目	variety name 品種名	scientific name 学名
	クサソテツ	クサソテツ	*Matteuccia struthiopteris*
	ホンワサビ	グリーンサム	*Wasabia japonica*
	ホンワサビ	真妻(まづま)	
	ゼンマイ	ゼンマイ	*Osmunda japonica*
	Osmunda		
	なたね	なたね(農林41号)	*Brassica napus*
	Rapeseed		
家畜	肉用牛	褐毛和種[Akage-washu;Red cattle]	*Bos taurus*
Livestock	Beef	黒毛和種	*Bos taurus*
		アンガス	
	乳用牛	ホルスタイン	
	Milk cow	ジャージー	
		ブラウンスイス	
		ガンジー	
		エアシャー	
	農用馬	ブルトン	*Equus caballus*
	Horses for farming	ペルシュロン	
		日本輓系種	
		道産子	
	乗用馬	ポニー	
	Horses for riding	クウォーターホース	
		アパルサ	
		アラブ	
		サラブレッド	
		クウォーターホース	
	肉用豚	バークシャー	*Sus scrofa domesticus*
	Pig	デュロック	
		ランドレース	
		大ヨークシャー	
		デカルブ	
		ハイポー	
		ヒゴサカエ302	
	肉用鶏	UKチャンキー	*Gallus gallus domesticus*
	Chicken	コブ	
		天草大王	
	採卵鶏	ボリスブラウン	
	Hens	烏骨鶏	
		イサブラウン	
		アローカナ	
	鑑賞鶏	肥後チャボ	
	Chicken for appreciation		
	乳用山羊	ザーネン	*Capra aegagrus hircus*
	Goat		
	肉用山羊	トカラ	
	Goat		
	肉用羊	サホーク	
	Sheep		
	毛肉兼用羊	コリデール	
	Sheep		

:local varieties of vegetables registered by Kumamoto prefecture and locally bred red cattle (Akaushi)
:熊本県が選定している「伝統野菜」(熊本の人や風土との関わり合いが強い野菜)及び在来種である「あか牛」

Annex 5: Positional relationship between pasture and village in each area



Ref.: The Aso City Board of Education, The Report of Conservation Research for Cultural Landscape in Aso as the secondary basic research, 2011