



National  
Parks  
of Japan



Aso-Kuju National Park  
<https://www.env.go.jp/park/aso/>



Aso Grassland Conservation Activity Centre  
<https://aso-sougencenter.jp>



Aso Grassland Restoration Donation  
Fund Guide  
(Aso Grassland Restoration Association)  
<https://www.asogreenstock.com/sougensaisei/act/donate/>



Controlled Burning Volunteer  
Programme Guide  
(Aso Green Stock)  
<https://www.asogreenstock.com/activities/openburning/>



Aso Grassland Restoration Project  
<https://www.asogreenstock.com/sougensaisei/>

# SAVING THE GRASSLANDS OF ASO

阿蘇の草原を守る



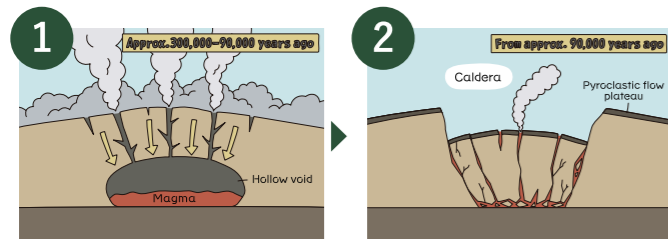
# People's Livelihoods and the Thousand-Year Grasslands

The grasslands of Aso spread across a volcanic plateau created by the massive eruptions of Mt. Aso in the distant past, and have been maintained by human activity that has continued uninterrupted for more than a thousand years. The landscape of Aso's grasslands can be said to be proof of the long-lasting connection between people and nature.

## Maintained by Human Hands, Generation after Generation The Vast and Beautiful Grasslands of Aso

The scenery of Aso is remarkably diverse. It features mountains with rugged, exposed rock faces, as well as plains offering expansive views and gently rolling hills. These landscapes were formed by eruptions of Mt. Aso that occurred between approximately 270,000 and 90,000 years ago, creating the Aso Caldera, a vast depression shaped like the bottom of a pot.

### How the Caldera Was Formed

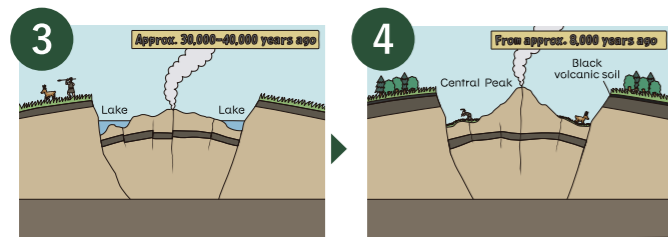


#### 1 Repeated massive volcanic eruptions

Enormous volumes of magma erupted from a massive underground magma chamber, creating a vast hollow space beneath the surface.

#### 2 The surface collapses, forming the caldera

Unable to bear the weight above, the surface collapsed, giving birth to a giant depression: the "caldera."



#### 3 Rainwater accumulates in the caldera, forming a lake

Rainwater collected in the depression forming a vast lake. On the outer rim mountains surrounding the lake, people lived by hunting (encircle-and-drive hunts).

#### 4 People living in the caldera

Over time, part of the caldera wall eroded and collapsed, draining the lake and creating a vast plain. People then began to settle within the caldera.



## Preserving the Grasslands Continuing Practices

Without human intervention, Aso's grasslands would become overgrown with trees and eventually turn into forest. It is thought that the early settlers of this area maintained the grasslands and used the wild grasses growing there for agriculture and livestock raising. Furthermore, the Engishiki\*, a legal code written approximately 1,100 years ago, contains descriptions of Aso's grasslands being used as "maki" (grazing land), showing that people living in Aso from at least the 9th century were already making use of and valuing the grasslands. Today, however, Japan's population is declining and lifestyles have changed dramatically, causing the extent of Aso's grasslands to shrink year by year. Maintaining grasslands requires large numbers of people, and local communities are actively working together to find ways to preserve them.

\*The Engishiki (Regulations of the Engi Era) is a 50-volume legal code completed in 927 during the mid-Heian period, compiling detailed procedural rules for government administration. It is the most important primary source for ancient history research, recording in detail state ceremonies, administration, and Shinto rituals.

## People's Livelihoods and Their Deep Connection to the Grasslands



### Water Source Conservation Capacity

See P5 ▶

Annual precipitation in the Aso region exceeds 3,000 mm, approximately twice the national average. Much of this rainwater passes through the highly permeable grassland and is stored in large quantities underground. This stored water feeds abundant springs and other sources that supply the headwaters of Kyushu's major rivers, providing agricultural water and drinking water for the many people living in those river basins.



### Agriculture and Wild Grasses

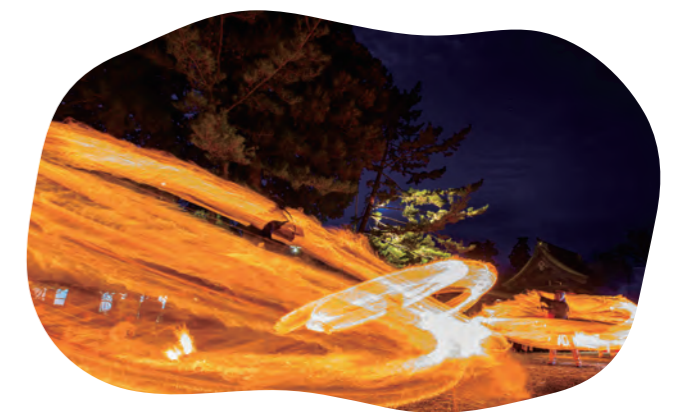
The soil of Aso contains volcanic ash and is not ideally suited for farming. Nevertheless, Aso farmers have devised ways to fertilize it—such as mixing wild grasses from the grasslands into the volcanic soil as compost—and today they grow delicious local products such as Aso Takana (a type of mustard greens) and Tsurunoko-imo (a variety of taro).



### Biodiversity

See P6 ▶

Aso's grasslands are home to a wide variety of unique and precious insects, plants, and other organisms, supporting a very rich ecosystem. For example, many species facing the threat of extinction, such as the Large Shijimi Blue butterfly (*Shijimiaeoides divinus*)—are found here.



### Traditional Culture

Over a thousand years, a distinctive traditional culture has emerged that is closely tied to the Aso grasslands and volcanic activity. For example, in the "Hifuri Shinji" (Fire-Swinging Ritual) performed at Aso Shrine, bundles of dried wild grass from Aso's grasslands are set alight and swung in circles overhead to celebrate the marriage of the deities and pray for a bountiful harvest.

**POINT** In Aso's grasslands, you can witness firsthand the blessings and culture born from the collaboration between people and nature.



## Spring

## Autumn

Around May, the colour of Aso's grasslands turns to a vivid fresh green; in autumn, when sunlight strikes them, they glow golden. The scenery changes dramatically with the passing seasons.

# The Grasslands in Crisis

Today, Japan's population is declining and lifestyles have changed dramatically, causing the extent of Aso's grasslands to shrink year by year. Maintaining grasslands requires large numbers of people, and local communities are actively working together to find ways to preserve them.

## Changing Lifestyles and Grassland Management

Aso's grasslands have long been used as pastureland for horses and cattle used in farming. Wild grasses were also indispensable to local residents in many aspects of daily life, used as thatching material for roofs, as fuel for heating, and for other purposes. Today, however, changes in lifestyle mean that fewer people use wild grasses as everyday materials and tools. Furthermore, horses and cattle for farm work have been replaced by tractors and other machines, and the number of people engaged in livestock farming using the grasslands as pasture has declined sharply, greatly reducing the opportunities to use the grasslands. As a result, the extent of the grasslands has shrunk to less than half what it was 100 years ago, and continues to decrease.



Carrying Grass from the Fields to the Village on the Back of a Cow



Kusadomari: Overnight Stays During the Grass Harvest

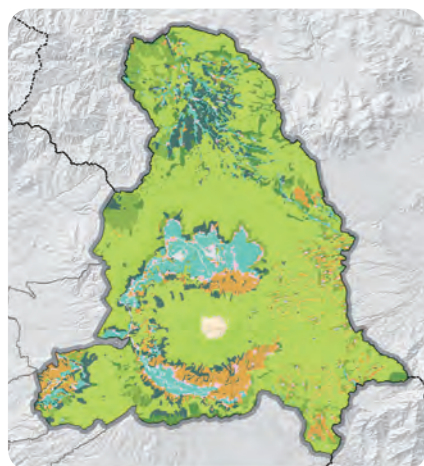


An Elegant Thatched-Roof Traditional Home



The Making of a Traditional Haystack (Kusakozumi)

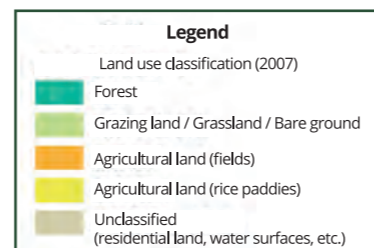
## Pick Up! Shrinking Grasslands



Around 1900 CE



Around 2000 CE



In this map, the yellow-green areas represent grasslands and the dark green areas represent forests. It shows how much grassland has been lost over the past 100 years.  
\* Photo provided by: Aso World Cultural Heritage Promotion Office



## Harvesting Wild Grass

(A description of the traditional haystacking process)

A traditional method of preserving grass, which was used as feed for cattle and horses during winter. Nowadays, the grass is dried in the sun and then rolled up for storage.



## Harvesting Thatch

Dried winter grasses are harvested as replacement thatching material for traditional buildings such as cultural properties. The harvest of thatch is expected to create new opportunities for grassland use and generate new businesses.



## Cattle Grazing

Cattle are put out to graze on Aso's grasslands every year from April to December. During winter, when the wild grasses wither, they are brought back to stables near residential areas and raised indoors.

## Using the Grasslands

The grasslands form beautiful landscapes and have been extensively used in local ways of life, agriculture, and other industries. Here we introduce some of the ways the grasslands are uniquely used in the Aso region.

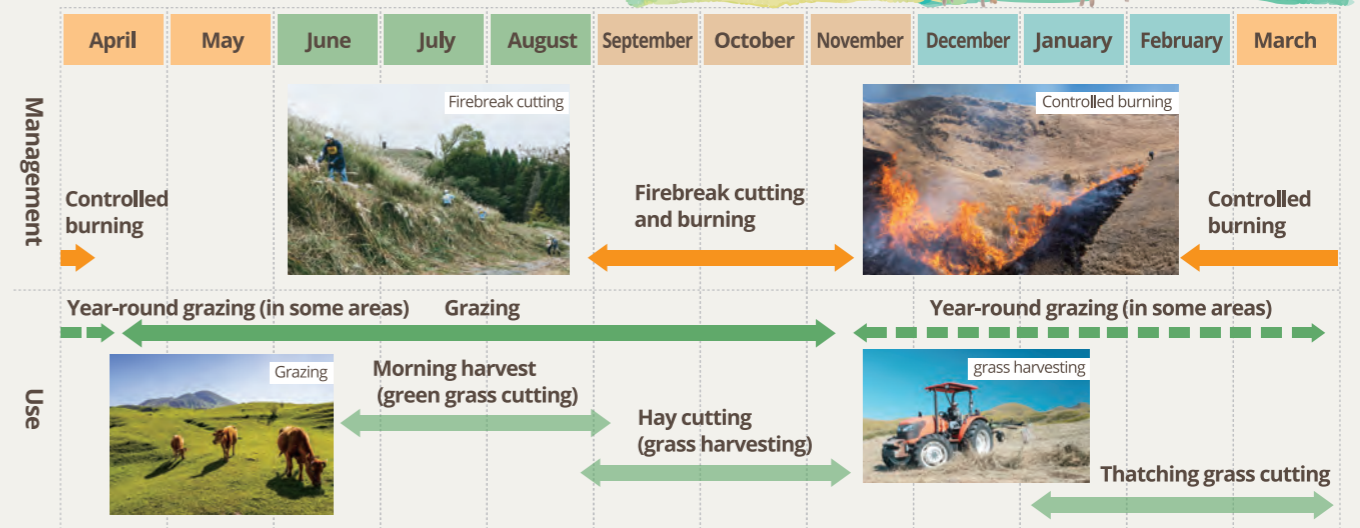


## Making Wild Grass Compost

A traditional farming technique in which wild grasses such as Japanese pampas grass (susuki) are mixed with cow manure and rice bran, then fermented to make compost.

## Pick Up!

## A Year's Activities in the Grasslands



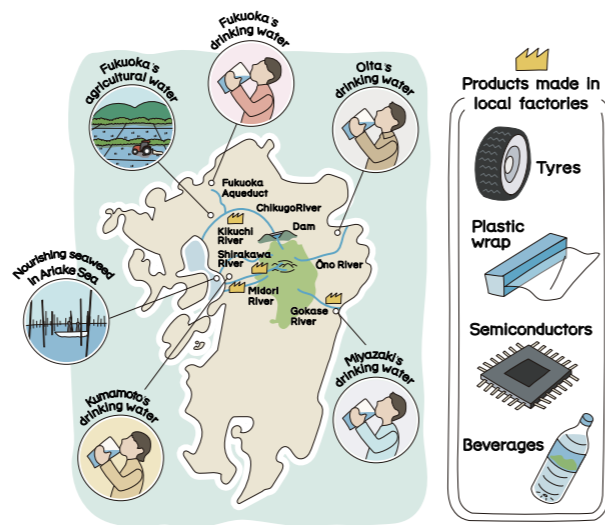
# Grassland benefits and functions



Sometimes, nature can only be maintained through human involvement. Untouched nature is beautiful in its own right. But just as an unmanaged forest can amplify damage from natural disasters, there are cases in which balance can only be preserved through appropriate human stewardship. The Aso grasslands offer an opportunity to witness up close the benefits born from this collaboration between people and nature.

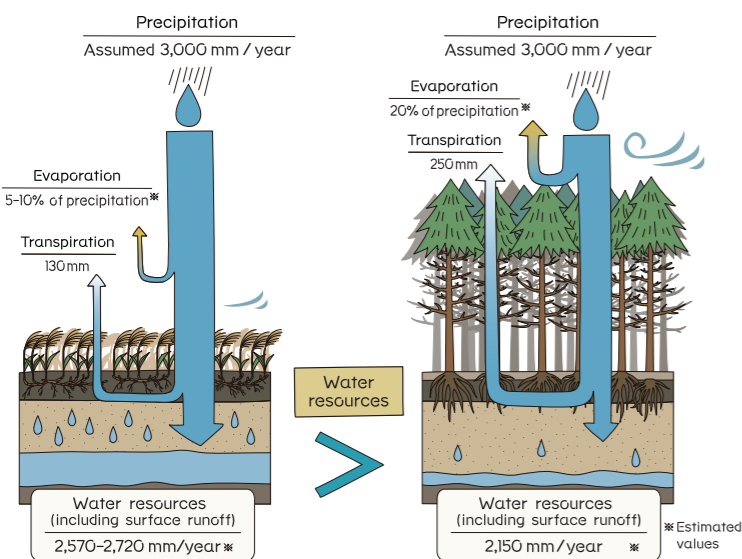
## Water retention capacity Nurturing Kyushu's Water Sources

Aso's grasslands receive more than twice the national average annual rainfall. The vast carpet of wild grass slows the flow of rainwater and allows huge quantities to soak into the volcanic soil below. This rainwater percolates through the ground of the Aso Five Peaks and Outer Rim Mountains over 20-30 years before emerging from more than 1,500 known spring sites and flowing into six major rivers across Kyushu. It is used as agricultural and drinking water, supporting the livelihoods of approximately 5 million people living in these river basins.

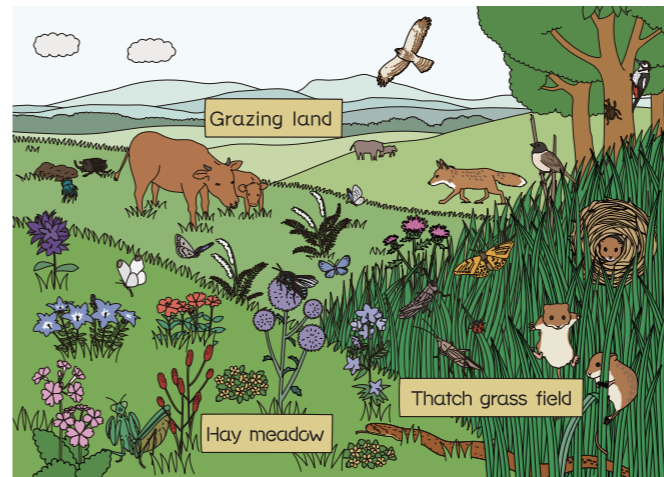


## What is the water retention capacity of Aso's grasslands?

Grasslands and forests store rainwater within the soil and release it slowly into rivers, preventing large volumes of water from being discharged all at once during heavy rain and maintaining a steady slow release even during dry periods. This function is called "water retention capacity." Recent research in the Aso region has shown that the annual transpiration of grassland plants (meaning the process by which water absorbed through roots is released as water vapor into the atmosphere) such as susuki (pampas grass), is approximately 130 mm. This is lower than that of Japanese cedar and cypress forests, which reaches about 250 mm. Research has also shown that interception evaporation (rainwater that hits leaves and branches and evaporates directly) is lower in grasslands than in forests. These results suggest that Aso's grasslands possess an excellent water retention capacity.



## Biodiversity



Aso's grasslands are an important habitat for many animals and plants; of approximately 1,600 plant species found in the area, about 600 grow in the grasslands. These grasslands form the foundation of a rich ecosystem inhabited by rare butterflies, bird species, and mammals.

For example, the Large Shijimi Blue butterfly (*Shijimiaeoides divinus asonis*) feeds on wild grassland plants (*Sophora flavescens*), while the Daikoku-kogane horned dung beetle (*Copris ochus*) on the droppings of animals living in the grasslands. Grassland bird species such as the Japanese reed bunting (*Emberiza yessoensis*) come in search of these insects and wild grass seeds.

The grasslands, shaped by the interactions of diverse animals and plants, not only provide us with beautiful scenery and recreational space, but also serve as local resources in the form of mountain edible plants, ceremonial flowers, and green manure for farming.



## Pick Up! The Concept of "Nature Positive"

This refers to halting the negative (loss) trend in biodiversity and reversing it toward positive (recovery). The loss of biodiversity is caused by a variety of factors: development, overexploitation and illegal harvesting, the abandonment of rural landscape management, the introduction of non-native species, water pollution, and the progression of global warming. While these direct factors often receive the most attention, they are rooted in broader socio-economic changes. For example, shifts in industrial structure and the decline of agriculture and forestry have led to the abandonment of rural landscape management, while the advancement of globalization has increased reliance on imported food and timber, resulting in lower domestic self-sufficiency and contributing to problems related to non-native species.

For more details, visit the Ministry of the Environment "Nature Positive Portal" website.  
<https://policies.env.go.jp/nature/nature-positive/>



## Disaster Prevention and Mitigation

The Aso region has a geological structure in which thick layers of volcanic ash have accumulated on top of bedrock. When exposed to heavy rainfall or major earthquakes, slope failures caused by the movement of surface volcanic ash soils are frequently observed. When such collapses occur in grassland areas, the volume of displaced soil is smaller than in forested areas, helping to reduce damage. In addition, grasslands recover quickly and play an important role in preventing soil erosion and the recurrence of slope failures.

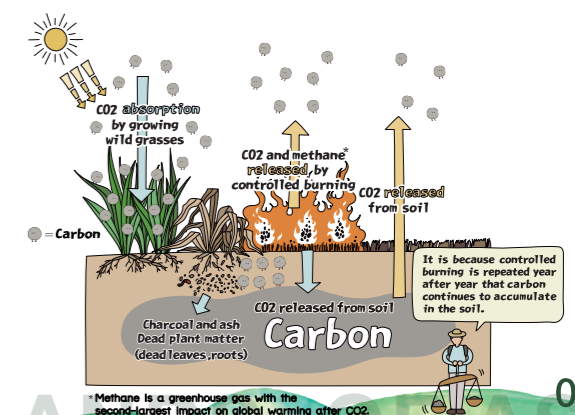


Scene from the July 1990 heavy rain disaster

5 years later

## Carbon Sequestration

Aso's grasslands continue to accumulate carbon beneath them. This is because charcoal remaining after controlled burns, decomposed roots and other parts of wild grasses, are stored in the soil as organic matter containing carbon. The carbon accumulation rate in Aso's wild grass fields is said to be 6.9 tonnes per hectare per year; calculated across the whole of Aso, this equates to sequestering the annual CO2 emissions of approximately 35,000 households every year. From the perspective of preventing global warming, Aso's grasslands make a major contribution.



# What We Can Do to Protect Aso's Grasslands

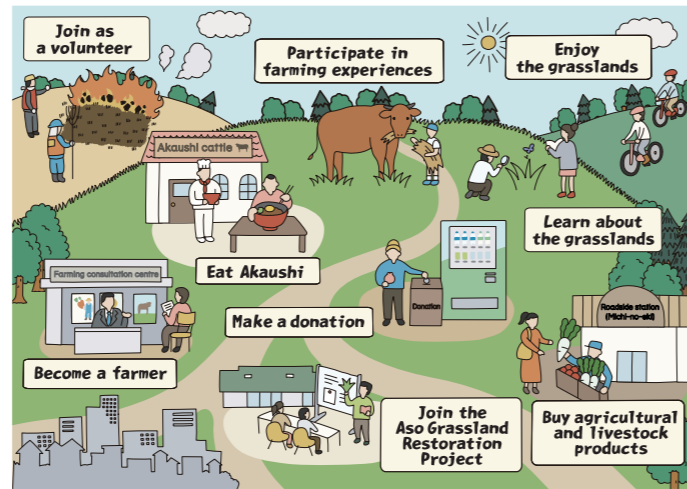


**Pick Up! Volunteers**

Volunteers involved in controlled burning play an important role in maintaining and restoring Aso's grasslands. Every year, hundreds of people from across Japan help with firebreak cutting and "Noyaki" (controlled burning)—the essential tasks for grassland maintenance. This volunteer programme includes training sessions to improve not only technical skills but also participants' understanding of the background and knowledge of Aso's grasslands (QR code on back cover).

## Grasslands and Local Livelihoods in Crisis

While Aso's grasslands continue to decrease, local efforts to maintain and restore them are growing. Volunteer activities in controlled burning, firebreak cutting, wild grass harvesting, and wildlife conservation are gaining momentum, and now play a major role in the maintenance and restoration of Aso's grasslands. Why not take part in these volunteer activities? Various new businesses that contribute to grassland maintenance and restoration are also being explored. For example, by joining cycling or other activity tours organised by certified guides known as "Bokuya Guides" (Private grassland Guides), part of the tour fee is returned to fund grassland maintenance costs. When visiting Aso, look for ways to enjoy yourself while contributing to grassland maintenance and restoration.



## Protecting the Grasslands in Many Different Ways

Even if you cannot visit Aso, there are ways you can help maintain and restore the grasslands. One is to make a donation. Donations to collection boxes—more than 150 of which are installed at tourist facilities and elsewhere—or online donations (see QR code on back cover) provide vital support for "grassland maintenance and restoration." You can also use the Akaushi Owner System to become the owner of an "Akaushi" (Japanese Red Cattle) grazing in Aso's grasslands. Naming that cow or buying Aso-produced food items supports Aso farmers and contributes to grassland maintenance and restoration.

**POINT**

Enjoying Aso's wonderful local agricultural produce and Akaushi beef helps protect the grasslands.

**ENJOY**



## Bokuya Guide (Grassland Activities)

Trekking, trail running, mountain biking, horseback riding... There are many activities to fully enjoy the appeal of Aso's grasslands. Part of the fee includes a "Pastureland Conservation Fee," creating a system in which you contribute to grassland management while having fun.

**LEARN**



## Grassland Learning

Making the importance of Aso's grasslands well known to the next generation is vital to the effort to maintain and restore them. Workshops, hands-on activities, and exhibitions are held for local children to learn about grassland maintenance and restoration.

**EAT**

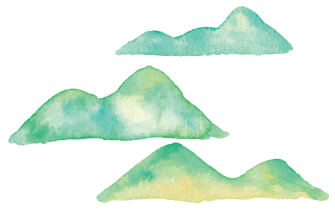


## Eat Local Products

Enjoying delicious local specialties unique to Aso, such as Akaushi beef, dairy products and vegetables, also contributes to the regeneration of the grasslands.



# TAKE ACTION!



**VOLUNTEER**



## Firebreak Cutting

Firebreak cutting refers to the creation of firebreaks between September and November to control the spread of fire during spring controlled burning. Wild grasses are cut short along the boundary between grasslands and forests or along management boundaries, forming long, narrow firebreaks. This practice helps prevent the uncontrolled spread of fire during controlled burning.

**POINT**

Noyaki and firebreak cutting are demanding tasks carried out every year. There is a serious shortage of people to do them.



## Noyaki (Controlled Burning)

The Aso Noyaki conducted around March each year is carried out with the utmost attention to the safety of the workers and the surrounding area. Through this controlled burning, the growth of shrubs and trees in the grasslands is prevented, pests are eliminated, and new growth is encouraged. Once burning is complete, new shoots of grasses and flowers quickly emerge from the scorched ground, turning the grasslands green once again.

**DONATION**



## Make a Donation

Donations are a form of support you can offer even from far away. Donations collected are used to support a variety of activities related to grassland restoration.

For more details, see the next page. ▶▶▶



# Various Ways of Getting Involved to Help Protect the Grasslands

## Enjoy and Protect

A portion of the fees for activity experiences is donated to support grassland conservation.



### Aso City Tourism Association: Aso is good!

Discover Aso's top sightseeing spots, a wide range of activity experiences such as paragliding, horseback riding, and trekking, local gourmet restaurants serving specialties like Akaushi beef bowls, as well as information on Aso's hot springs and accommodation options.

<https://www.asocity-kanko.jp/>



### Aso Fields Running

Experience the thrill of running through breathtaking grasslands normally off-limits to the public! Various events are held throughout the year across the beautiful landscapes of Aso.

<https://aso-field-run.jp/>



## Preserving the Beautiful Scenery of the Four Seasons for Generations to Come.

In spring, new shoots emerge from the land after the controlled burning. In summer, lush green grasslands stretch out, with a peaceful scene of grazing cattle and horses. In autumn, silver grass sways in the wind and the grasslands are dyed golden. In winter, the landscape takes on a quiet, snow-covered appearance.

This magnificent landscape has been protected by human activity for over a thousand years, and we want to pass it on to the future. Let's think together about what each of us can do now.



## Get Involved



### Aso Green Stock Public Interest Foundation

Established in 1995, this pioneering organisation in Japan brings together residents, farming communities, businesses, and government to protect Aso's nature. It runs a volunteer controlled-burning support programme on behalf of farmers who are short of labour.

<https://www.asogreenstock.com/>



## Make a Donation



### Aso Grassland Restoration Donation Fund

Donations can be made in a variety of ways: bank transfers, Yahoo! Internet Donations, donation-linked vending machines, and more.

<https://www.asogreenstock.com/sougensaisei/act/donate/>



### Kyushu Water Stewardship Fund —Protecting Aso's Water

Focusing on the vital role of water source recharge long supported by Aso's grasslands and natural environment, this fund aims to protect and sustain this precious resource for the future. By safeguarding Aso's nature, it helps pass on clean and abundant water to the next generation across the whole of Kyushu.

<https://www.asogreenstock.com/sougensaisei/mizukikin/>



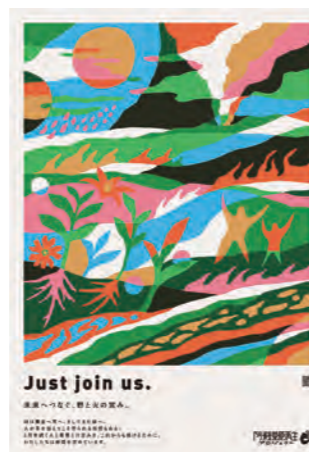
## Learn



### Aso Grassland Conservation Centre

In addition to being designated as a national park, Aso has also been recognised as a Globally Important Agricultural Heritage System (GIAHS) and a Global Geopark. This facility is a place where you can learn about Aso's grasslands and serves as a base for various activities related to the grasslands.

<https://aso-soujcenter.jp/>



### Aso Grassland Restoration Project

This project was launched to make more people aware of the challenges facing the grasslands, spark their interest, and make it easier to get involved with the grasslands. It also promotes the appeal of Aso's grasslands through social media and other channels.



<https://www.asogreenstock.com/sougensaisei/>

## Aso-Kuju National Park

The scent of Grasslands, the breath of volcanoes.  
The blessing of the wind and water,  
connected by people, a land of wonder

The main features of Aso-Kuju National Park are the volcanic mountain ranges, including Mount Aso, which towers over a large caldera, and the Kuju mountain range to the north, as well as the majestic, gently sloping grasslands that surround them. The contrast between the volcanoes and the grasslands is one of the major attractions for visitors.

For more details

Ministry of the Environment:  
Let's Visit National Parks!  
Aso-Kuju National Park

<https://www.env.go.jp/nature/nationalparks/list/aso-kuju/>

