

# The Sado Complex of Heritage Mines, Primarily Gold Mines







We are working for Sado Gold and Silver Mine to be inscribed as the World Heritage site of UNESCO.



Since 2006, Niigata Prefecture and Sado City have been collaborating in research on Sado Gold and Silver Mine aiming for its World Cultural Heritage inscription. In 2010 it was listed on the World Heritage Tentative List of Japan\* under the name of "Sado Complex of Heritage Mines, Primarily Gold Mines", and officially became proposed property for World Cultural Heritage.

At present, we work on various things, including the conservation of component parts and the development of a network of receiving visitors, trying to be inscribed sooner.

\*It is a list of World Heritage nomination submitted by the state parties to UNESCO, and World Heritage will be inscribed from among the properties on this list.

### 3 Aikawa Gold and Silver Mine

It is the biggest gold and silver mine in Japan, which was operated more than 400 years from the end of 16th century. It is very exceptional where historical ruins of each period and mining communities have been surviving together.

### 2 Tsurushi Silver Mine

This mine triggered the discovery of Aikawa Gold and Silver Mine. A lot of evidences showing the transition from *surface mining* to *horizontal tunnel mining* can be observed here.

### 1 Nishimikawa Placer Gold Mine

This mine is assumed to be the oldest placer gold mine in Sado according to the *Tale of Times Now and Past*, one of the oldest Japanese collection of stories. A lot of historical remains from the *Edo* period showing placer gold collection system still can be observed here.

### 6 Katabe-Kanoura Quarry

The quarry where stones for the lower part of the stone mills were quarried. They were essential for dressing process of gold and silver during the *Edo* period.

### 7 Tojigawa Hydro Power Plant No.2

The plant which supplied electricity to the mechanized Sado mine during *Taisho* period through *Showa* period.

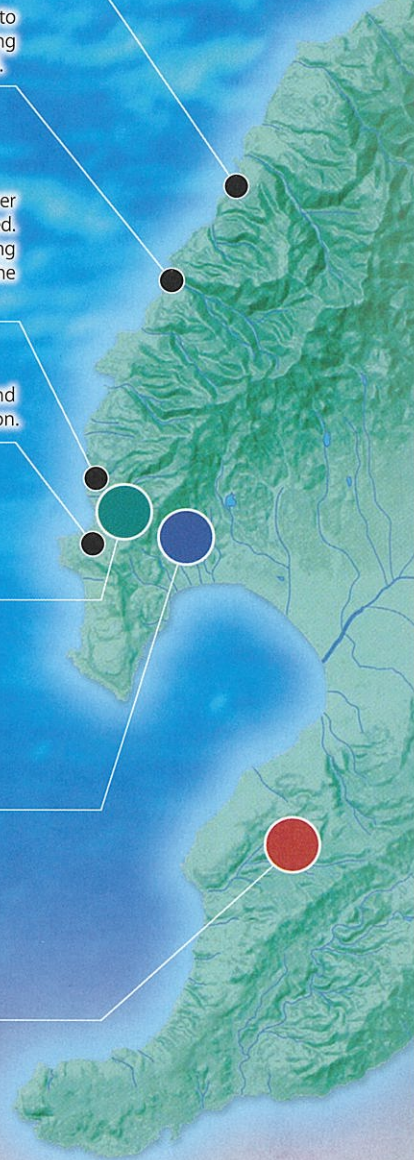
### 5 Fukiage Quarry

The quarry where stones for the upper part of the stone mills were quarried. They were essential for dressing process of gold and silver during the *Edo* period.

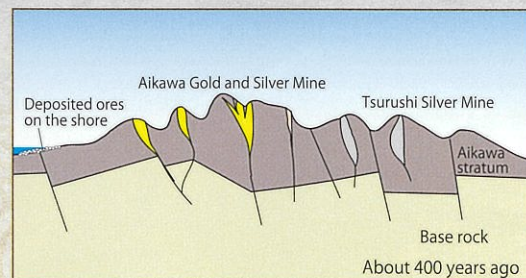
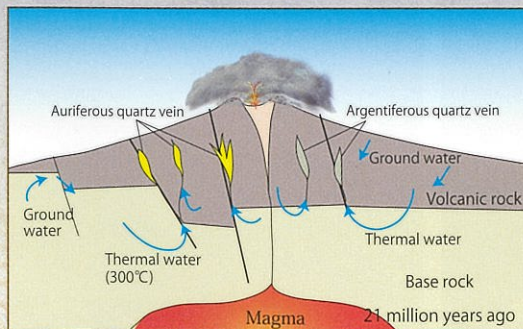
### 4 Oma Port

A modern port built to carry in and out ores and materials for production.

Sado Island



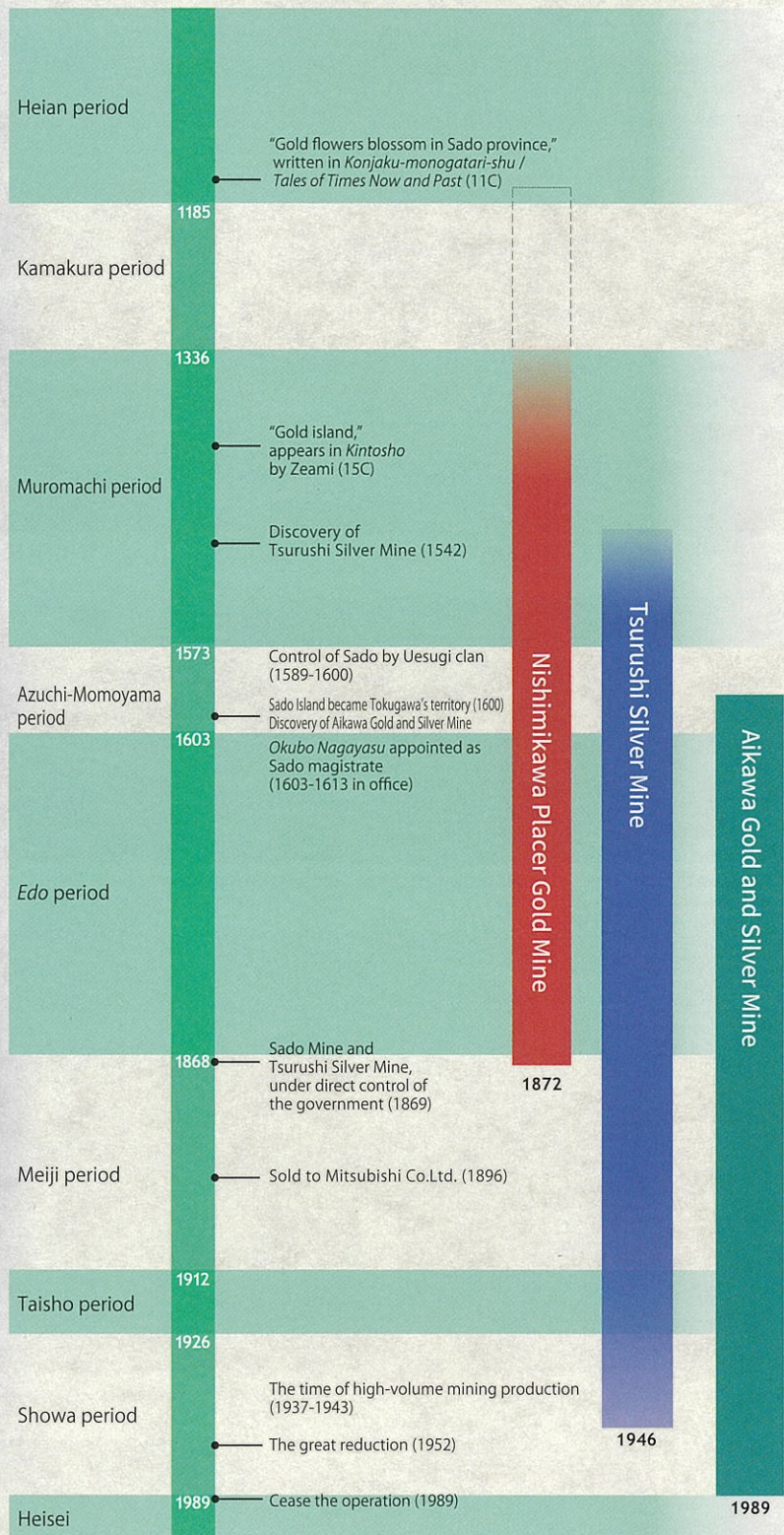
### Evolution of Gold Vein



Various minerals such as gold, silver, copper, quartz and so on started to melt from rocks into ground water heated with magma. When this thermal water rose up through cracks of bedrock, gold and quartz were deposited on the wall of the cracks, and veins were formed. At *Aikawa Gold and Silver Mine*, you can still see the ruins of outcrop mining of *Aobanmyaku* vein, which is one of the largest veins in Japan.



## History of Gold and Silver Mines in Sado



### The value of Sado Gold and Silver Mine as World Heritage site

- ◆ This is the globally exceptional mine where historical remains survive in a set of ruins and mining settlement in each period over more than 400 years in good condition.
- ◆ The production of gold in Sado continued to support national finance for a long period of time.
- ◆ More than 100 picture scrolls, which describe gold-production process concerning Sado Gold and Silver Mine, are left. Such a mine is very exceptional in the world and there is no other precedents elsewhere.





# Nishimikawa Placer Gold Mine

The history of production of gold and silver in Sado goes back to the ancient times. It is said that it was at Nishimikawa Placer Gold Mine that panning gold was conducted, which appears on *Konjaku-monogatari-shu, Tales of Times Now and Past*, edited around the end of the 12th-century.

At *Nishimikawa Placer Gold Mine*, after dirt containing gold into a stratum was dropped down into the waterways, miners would flush out all of the water at once in a process known as "Onagashi" to wash down any excess dirt. In this case, there was a shortage of water required. Therefore, long waterways coming from a water source were erected, and reservoirs were made so that a large amount of water could be stored. Here, remains of gold panning and these waterways still survive, widely distributed.



Mt. Toramaru-yama, the largest mining area in Nishimikawa Placer Gold Mine (Photo by Hoichi Nishiyama)



Placer Gold



Oyamazumi-jinja shrine



Shokoku-rokujuhakkei Sado-kinyama, Hiroshige the Second, Ukiyo-e print depicting the scene of panning gold, Owned by Nagaoka City Central Library.



Farming landscape, Sasagawa, once placer gold mining community



Piled-up stone structure (Workshop, Rest area)





# Tsurushi Silver Mine

This mine was first discovered in the middle of the 16th century and was the largest silver mine in Sado, where more than 600 remains of mining are identified. Various mining techniques at different times have been identified: "surface mining", mining ores on the surface of the ground; "chase mining", mining chasing after the shape of veins; "Yokoai mining", mining ores by digging horizontal tunnel. In addition, many related remains were identified such as local magistrate's office, mining village, and so on.



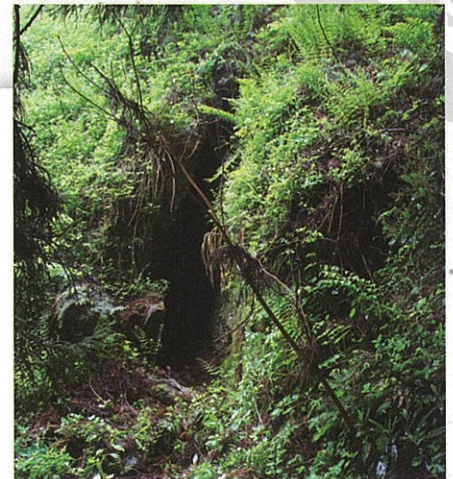
The "Otaki Mabu" Tunnel, one of the representative tunnel of Tsurushi Silver Mine (Photo by Hoichi Nishiyama)



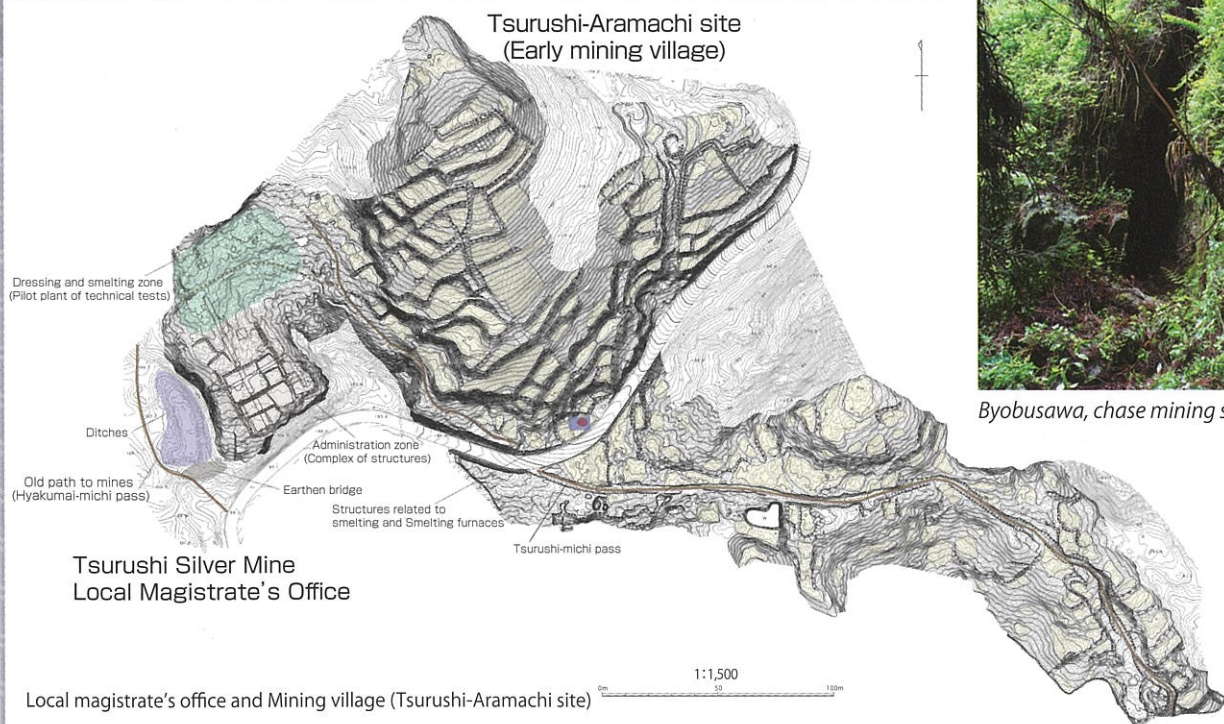
Local magistrate's office, on man-made terrace



Hyakumaidaira, large surface mining site



Byobusawa, chase mining site







# Aikawa Gold and Silver Mine

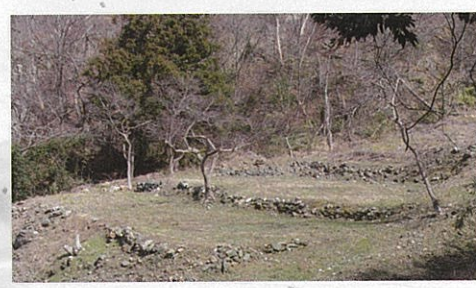
Edo period

Full-scale development of Aikawa Gold and Silver Mine began in 1601, and Sado was under the control of Tokugawa Shogunate. *Yamashi*, mine managers, were called into Sado from Iwami, and other areas in Japan, and cutting-edge techniques in surveying, drainage, smelting (cupellation, cementation with sulfur, cementation with salt) were introduced. These techniques led Aikawa Gold and Silver Mine into one of the largest mines in the world. Later such techniques used in Sado spread all over the country.

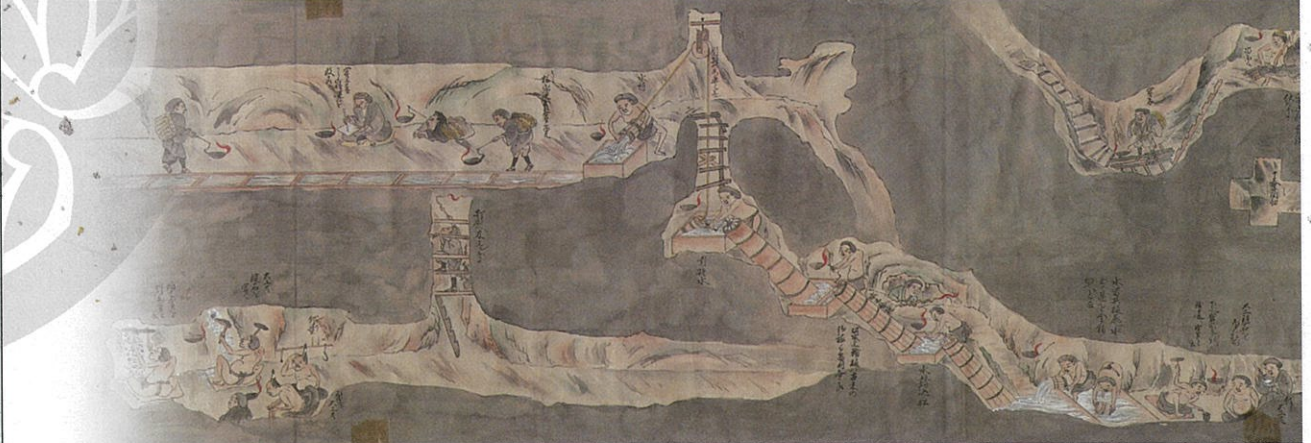
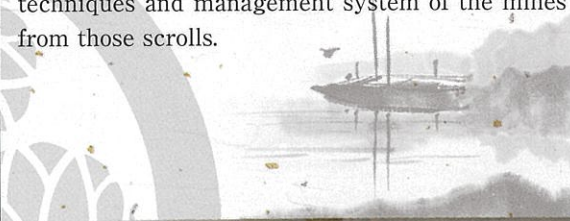
There were no other mines in Japan which conducted the operation from mining through minting *koban* coins, and its operation process can be seen in vividly depicted picture scrolls. More than one hundred of those scrolls still survive. You will learn the detailed transition of mining techniques and management system of the mines from those scrolls.



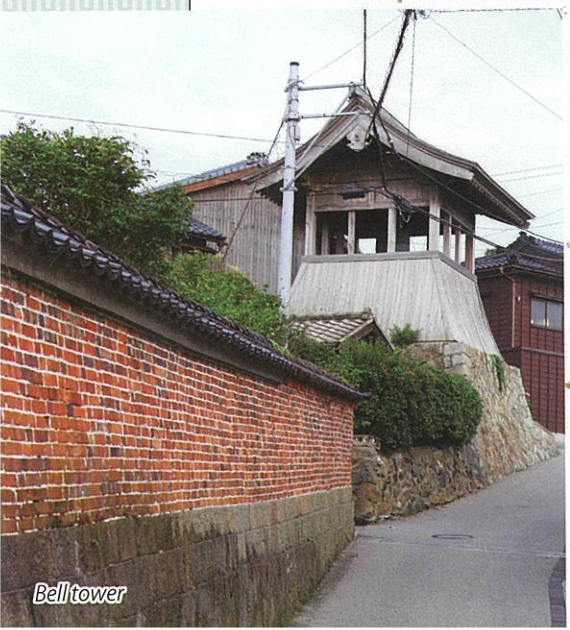
*Doyu-no-warito* Open-cut from the east



*Kamiaikawa* area, early mining settlement



*Sado-no-kuni Kanahori-no-maki*, Owned by Aikawa Folk Museum



Belltower



*Katabe-Kanoura* Quarry



*Fukiage* Quarry

[Photo by Hoichi Nishiyama]



# Aikawa In and after Meiji era Gold and Silver Mine

In Meiji era, Aikawa Gold and Silver Mine and Tsurūshi Silver Mine became “Sado Mine” and started to be operated by the new meiji government in 1869, and then it was sold to Mitsubishi in 1896. During this period, both Western engineers invited by the government and Japanese engineers who had studied abroad arrived in and introduced advanced technology from the West such as the method to dig horizontal tunnels at regular intervals on a vertical shaft, and mechanization for transporting ores. With these technologies the amount of production of gold and silver was largely increased, and Sado Mine was modernized to be representative mine of the country.



Odate Vertical Shaft

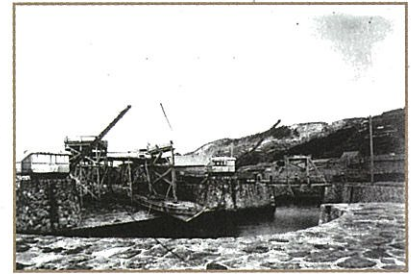
[Photo by Hoichi Nishiyama]



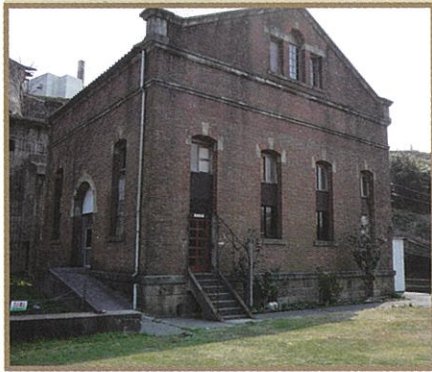
Kitazawa thermal power plant and cableways in the beginning of the 20th century, Owned by Aikawa Folk Museum



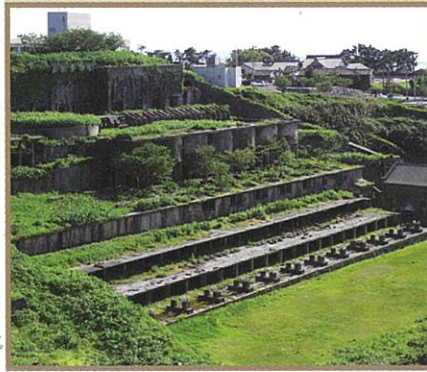
Kitazawa flotation plant around 1945, Owned by Aikawa Folk Museum



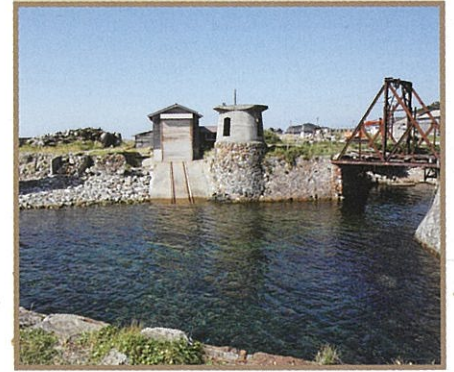
Oma port in the beginning of the 20th century, Owned by Aikawa Folk Museum



Kitazawa thermal power plant (present)



Kitazawa flotation plant (present), [Photo by Hoichi Nishiyama]



Oma port (present)



Kyomachi-dori street, remaining vestiges of mining town



Tojigawa Hydro Power Plant No.2







[Photo by Hoichi Nishiyama]

## World Heritage

### The Common Treasure for Humanity

World Heritage, which was brought about by nature and mankind, and has been passed down from the past to the present, is a common irreplaceable treasure for humanity. The sites includes what is endangered by war, natural disasters, and environmental pollutions. It is the World Heritage Sites that all the people in the world should leave for the next generation under the protection through international cooperation across the border.

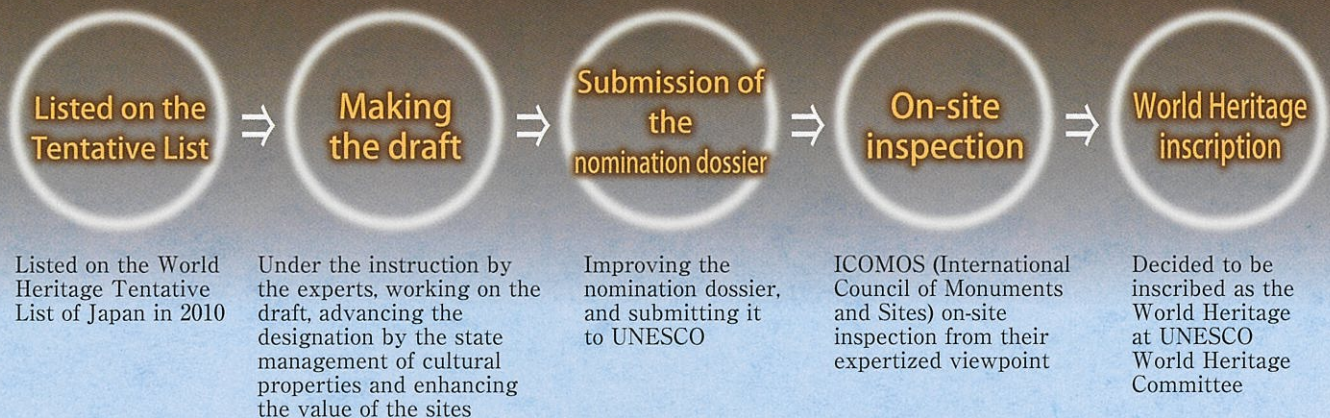
### UNESCO and World Heritage Site

UNESCO is the specialized agencies of the United Nations. The World Heritage Centre in UNESCO Headquarters, based on Convention Concerning the protection of the World Cultural and Natural Heritage, creates a framework of international cooperation to preserve World Heritage and hand down to the future. It calls for the protection of World Heritage.

### The Classification of World Heritage Sites

[Cultural Heritage]  
Monument, groups of buildings, sites, cultural landscape, and so on  
[Natural Heritage]  
The topography and geological feature, ecosystem, landscape, the habitat of endangered species of wild fauna and flora, and so on  
[Mixed Cultural and Natural Heritage]  
This heritage has both value of the cultural and the natural.

## Road to inscription as the World Heritage site



Sado, for the World Heritage

—————We would like to ask for your support.—————

For more information, please see website

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