

Sodaiyousui Irrigation System

[Gifu Prefecture /
Seki City, etc.]

Sodaiyousui Irrigation System

Farmer's wishes and canal
beyond the territory



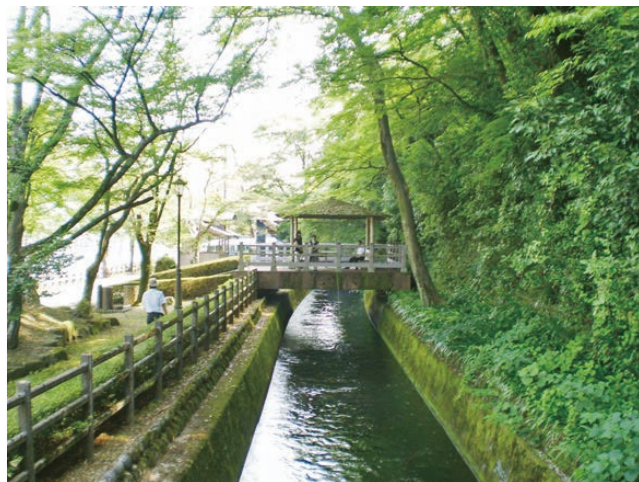
- Although this area was arid, there were no large irrigation facilities due to the Bakuhan system dividing up the governed area. Accordingly, local farmers in combination implemented a canal construction project.
- The construction involved very demanding work to excavate the bedrock with "gravers" and "chisels", but once complete in 1669, the former wasteland had been transformed into a beautiful new paddy field.
- Amid ongoing efforts to repair the canal, and this history is also published in the school's supplementary reader.



Traces of rock excavation



Irinoto diversion in the early Showa era



Canal

Irukaike Reservoir

[Aichi Prefecture / Inuyama City]

Irukaike Reservoir

A tough reservoir constructed with high technology and meticulous research



- Irukaike Reservoir was constructed in 1633 because the area was originally prone to drought and ongoing conflict raged over water.
- Although attempts to construct an embankment failed many times, they eventually succeeded with new technology at that time called the "shelf construction method", which involved constructing a bridge, piling up soil on it, then burning the bridge down.
- Careful investigation and construction management technology were also noteworthy. While the surrounding reservoirs collapsed during the 1891 earthquake, the damage to Irukaike Reservoir was minor, proving its high seismic performance.



Full view of Irukaike Reservoir



Full view in the old map



Current Irukaike Reservoir (spillway and discharging are viewed from upstream)



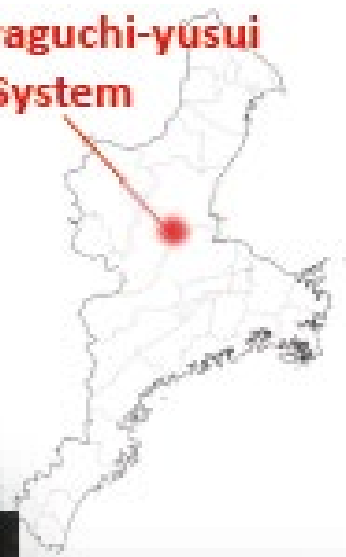
Irukaike Reservoir construction in 1883

Minamiieki-kawaguchi-yusui Irrigation System

[Mie Prefecture / Tsu City]

Minamiieki-kawaguchi-yusui Irrigation System

A canal protected with awareness that the facility itself constitutes cultural heritage of the region



■ Minamiieki-Kawaguchi yusui dates back a long time, first excavated in 1190 during the Heian era, before combining two water systems, Minamiieki and Kawaguchi yusuis, in 1729. Since the canal straddled small countries with different lords during that era, detailed rules were set out regarding its handling. This irrigation practice has been passed down for centuries and is still being observed.

■ By skillfully utilizing the natural terrain, a canal made by carving the bedrock with a chisel or - if necessary - a pillar hole was made in the bedrock and a log was inserted into the hole. The log was used as the core and the side walls of the canal were made of red soil mixed with lime. The traces of such hard work and ingenuity are visible in the natural terrain.

■ Agricultural water is provided to approximately 360ha of cultivated land in the area through facilities such as a trunk canal and diversion work of approximately 8 km in addition to one head work.



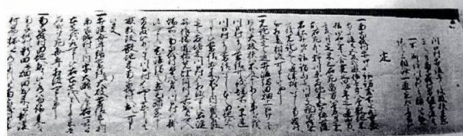
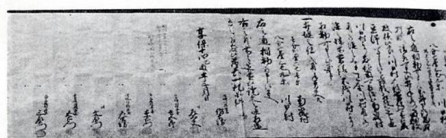
[Trunk canal]



[Canal flowing through the town]



[Predecessor's tool]



[Kawaguchi yusui Contract prepared in Kyoho era]



[Canal trace made by carving the bedrock with chisel]



[Pillar hole remnants]

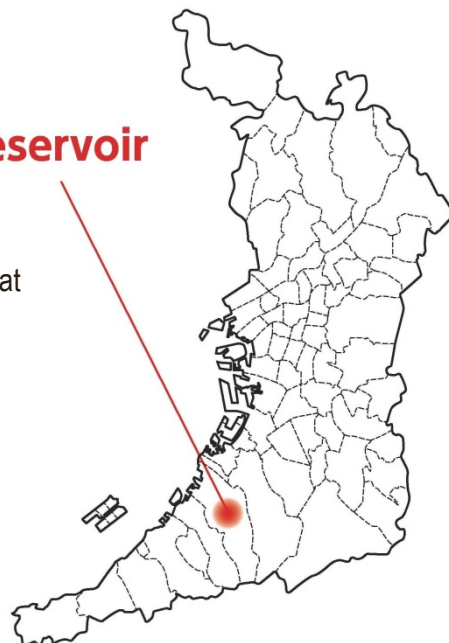
Kumedaike Reservoir

[Osaka Prefecture /
Kishiwada City]

- Gyoki, famous for "The Great Buddha of Nara," joined locals in petitioning to the emperor and completed Kumedaike in a total of 14 years from 725 onwards.
- Its embankment was made by alternately solidifying clay and gravel and adopting the "Shikiha method", in which leaves are sandwiched between both layers. This construction method was based on a technical exchange with Southeast Asia.
- Previously, a very unique irrigation practice meant only turbid water could be taken during high flow during downpours.

Kumedaike Reservoir

A permanent reservoir that began with technical exchanges in East Asia



Panoramic view of Kumedaike Reservoir



Above: State of Kumedaike reservoir in around 1965
Below: Current Kumedaike reservoir and Kumeda Temple



Gyoki visit (Danjiri Festival, October)

Tokiwako Reservoir

[Yamaguchi Prefecture /
Ube City]

- Hirotooshi Fukubara, the lord of the time, who promoted the policy of opening farmland, started the embankment of Tokiwako Reservoir in 1695 and completed a reservoir covering 80ha in 1698.
- When it was constructed, rice production increased from 400,000 to 1.25 million kg, allowing food production for more than 5,000 people annually.
- Tokiwa Park was opened in 1925 to open the scenic area around Tokiwako Reservoir to the general public.
- Currently, the shores of Tokiwako Reservoir are full of greenery and flowers and it hosts the "UBE Biennale (Contemporary Japanese Sculpture Exhibition)" as well as showcasing sculptures. It is loved by many citizens as a city park used in various ways.



Diagonal gutter



Spillway

Tokiwako Reservoir



A reservoir that has transformed the wasteland into a food-producing area for four times the population



Full view of Tokiwako Reservoir



Sketch of Tokiwa Tamei
prepared in 1885