Flood control study from the past history

Information about Fuji river Flood Control

- Shingen Embankment
- Manriki Forest
- Karigane Embankment

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There are various flood control facilities along Fuji river, and there are many facilities or methods which can be referred for other steep rivers in Japan. These facilities exist at different locations such as in the river flow or near the river bank. Their sizes vary from a tall and strong embankment which is easily found to a small water barricade such as Gyuwaku hidden in an ordinary field.

All of them are important flood control facilities which protect people who live near the river during flood disasters.

This small booklet was published to announce our ancestors' precious idea and efforts for Fuji river flood control. Among various flood control facilities along Fuji river, three locations of “Shingen Embankment”, “Manriki Forest”, and “Karigane Embankment” are introduced in this booklet to help you understand Fuji river.

“Shingen Embankment” is located in the west side of the Kofu basin. It is told that Shingen Takeda, a famous war lord in warring state, constructed it, and it is called by that name honoring his achievement.

“Manriki Forest” is located in the east of the Kofu basin to prevent a flood of Fuefuki river. This is a flood prevention forest where covered by dense and large pine trees. It is told that the origin of the name, “Manriki”, has the wish of making a strong bank with all people’s united power.

“Karigane Embankment” is located in Fuji city in Shizuoka prefecture of Fuji river (lower area). The name is called because the shape of the facility looks like wild geese flying in the sky. This is a very unique shape embankment.

We believe that in every flood control facilities, you will see the wonderfulness of the flood control techniques achieved by our ancestors. Please try to get good understandings about Fuji river flood control history related with those facilities and people’s knowledge who involved.
Fuji River, gathers water from Southern Alps, Yatsugatake, and Okuchichibu mountains, flows into Suruga bay.

A large river in Japan Islands
Running to the south through Kofu basin toward Suruga bay...

Fuji river as one of three steep rivers in Japan

At the upper area of Fuji river Southen Alps at the left, Mt. Yatsugatake at the right. The left side river is Kamanashi river (Fuji river), Nirasaki city central area at the middle.

Fast requirement for river preparation
**History of the Fuji River Flood Control**

This presents the major events related with Fuji river flood control from the 9th century to the 20th century.

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**Fuji river has the third Design flood discharge in Japan**

The Fuji river has the third Design flood discharge in Japan, which is crucial for flood control and management. Constantly changing flow amount makes it necessary to monitor and control the river's discharge to prevent flooding and ensure the safety of the surrounding areas.

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**Constantly changing flow amount**

The constant and changing flow amount of the Fuji river necessitates careful management and control measures to prevent flooding and protect the surrounding areas. The table below provides a summary of the river's key characteristics and control strategies over time.

<table>
<thead>
<tr>
<th>Year</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>9th century</td>
<td>Initial flood control measures established</td>
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<tr>
<td>20th century</td>
<td>Advanced flood control technologies implemented</td>
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**History of the Fuji River Flood Control**

This presents the major events related with Fuji river flood control from the 9th century to the 20th century.
Shingen Embankment, protecting Kofu basin from flood disasters.

Major facility in the west side of Kofu basin flood control

Shingen Embankment
Kai city, Yamanashi Prefecture (Kamanashi River)
Name of Midai River and Flood Control History

Midai river, originating from Koma mountains, merges into Kamanashi river.

The God for flood control in Kofu basin at Sanyya shrine.

Shingen embankment still protect people in Kofu basin.
Shingen Embankment now

Shingen embankment now

Large zelkova trees at Shingen embankment tell its long history.
Lord Shingen Takeda, the origin of flood control in Japan

Large flood control project over 20 years

Seigyu and concrete made surface covers are applied in the present days.

It offers recreational and relaxed moment to people.
Plan concerns both Midai river and Kamanashi river

 strokes have been stacked to control Midai river.

Shogi-gashira at Tatsuoka, Nirasaki city. Part of 16 stones for confluence control.
富士川（上部川）は、富士川（上部川）と今村川の合流点（南アルプスの背後）に流れています。พื้นที่ที่อยู่ทางเหนือของระดับน้ำจะไหลไปทางทิศตะวันออก แต่อาร์จิสันปราสาท ประเทศญี่ปุ่น อยู่ในบริเวณนี้ ซึ่งเป็นสถานที่ที่มีชื่อเสียงทางประวัติศาสตร์และข้อมูลในช่วงฤดูร้อน

*Fuji river (Kamanashi river) flows toward Takaiwa.*

*Omiyuki-san festival with unique foot step.*

*Fuji river (Kamanashi river) and Midai river confluence point (Southen Alps at the back).*
Major facility in the east side of Kofu basin flood control

Manriki Forest
Yamanashi city, Yamanashi prefecture. (Fuefuki river)

Three of the most frequent disaster locations and Manriki forest
Manriki Forest Now

Sashide stream known since Heian period.
Manriki Forest constructed by the efforts in the past.

Large forest prevents debris flows.
Manriki Forest is a flood control forest consists of red pine trees.

Manriki Forest can be also a park.

Stone stacked bank in the past.

Open levee. (A stream offers pleasant moment.)
As a guardian protects a large Fuji plain
Karigane Embankment
Now

The Karigane Embankment is a prominent feature along the banks of the Fuji River. It serves as a vital infrastructure project, offering a blend of recreational and functional benefits. The embankment is characterized by its strategic location, offering a panoramic view of the river and surrounding landscapes. It is a popular destination for both locals and tourists, attracting visitors with its scenic beauty and a host of activities.

The embankment project has been in development for several years, with multiple phases aimed at enhancing the area's appeal. Key features include walking trails, cycling paths, and various lookout points that provide stunning vistas of the river and its environs. The development has also incorporated environmental conservation measures, ensuring the area remains a natural haven.

The embankment is accessible via several routes, with easy connectivity to local transportation systems. It has become an integral part of the community, offering a space for relaxation and family activities. With its modern design and well-maintained facilities, the Karigane Embankment is a testament to the region's commitment to sustainable development and quality of life.

Along the Fuji river
Furugori clan control expanded to Kashimaso

The Furugori clan control expanded to Kashimaso, bringing control to the area initially under the control of the Kashimaso clan. The Karigane Embankment, resembling the roof of a flying kite, was first constructed by Shigetaka in the third generation. Shigetoshi, the third generation, completed the Karigane Embankment, which is located near the mouth of the Fuji River and Suruga Bay. It is a significant example of Japanese civil engineering.

Karigane Embankment construction started initially by Shigetaka

The Karigane Embankment was constructed by Shigetaka, who is known for his contributions to civil engineering. The construction was initiated by Shigetaka, and the completion was achieved by his son, Shigetoshi. The embankment, located near the mouth of the Fuji River and Suruga Bay, is a significant example of Japanese civil engineering.

Third generation, Shigetoshi, completed Karigane Embankment

The completion of the Karigane Embankment was a significant milestone in Japanese civil engineering. The construction was initiated by Shigetaka, and the completion was achieved by his son, Shigetoshi. The completion of the Karigane Embankment was a significant accomplishment for the Furugori clan, as it allowed them to exert control over the area.

Furugori clan tomb at Zuirinji temple.

Spring scene at willow embankment.

Karigane Embankment, resembling to Gleece flying in the sky, Fuji river mouth and Suruga bay.
Studying the flood control technology at Karigane embankment

Studying the flood control technology at Karigane embankment

We have observed Shingen embankment, Manriki forest, and Karigane embankment as treasures along Fuji river. These facilities made by our ancestors are still control and protect us from flood disasters. Normally these are very quietly standing. The future flood control might need to improve according to our new era. We would like you to get close to Fuji river, and please put your opinions, impression, and suggestion.

Epilogue

We have observed Shingen embankment, Manriki forest, and Karigane embankment as treasures along Fuji river. These facilities made by our ancestors are still control and protect us from flood disasters. Normally these are very quietly standing. The future flood control might need to improve according to our new era. We would like you to get close to Fuji river, and please put your opinions, impression, and suggestion.
FUJI RIVER'S FLOOD CONTROL