An Evaluation of the Intrinsic Value of the Takada Pine Forest (Takakada-no-Matsubara) as a Scenic Beauty Spot in Japan

Takashi AWANO*

Abstract

Tohoku Region Pacific Coast Earthquake happened on March 11th, 2011. Due to this huge earthquake and tsunami, numerous lives were lost and the damaged to people’s lifestyle and social system was unimaginable. With regard to landscape heritage, the Takada Pine Forest (Takakada-no-Matsubara) was severely damaged, which is a nationally designated Scenic Beauty spot. It is located in Rikuzentakata city, Iwate Prefecture. The aim of this paper is to define the forest’s intrinsic value, by clarifying the historic process of the formation of the pine forest from the Edo period to the Showa period, and discuss the effects of previous large tsunamis (Tempo Sanriku Tsunami in 1835, Meiji Sanriku Tsunami in 1896, Showa Sanriku Tsunami in 1933, Chili Tsunami in 1960), as well as the current value and future vision of this historically scenic area. From the results of document analysis and field surveys, we led that the Takada Pine Forest has been developed and managed by local people’s activities since the 17th century. This has been passed down over many generations. Therefore, it can be said that the Takada Pine Forest has never lost its intrinsic value and has kept its potential worth, as long as the will to preserve and rehabilitate the forest will continue existing from generation to generation.

Keyword: Takada Pine Forest (Takakada-no-Matsubara), Scenic Beauty Spot, Trees Planted to Protect the Shoreline, Tohoku Region Pacific Coast Earthquake

1. Introduction

The Tohoku Region Pacific Coast Earthquake happened on March 11th, 2011. Due to this huge earthquake and tsunami, numerous lives were lost and the damaged to people’s lifestyle and social system was unimaginable. With regard to our landscape heritage, the Takada Pine Forest, which is a nationally designated Scenic Beauty spot, was severely damaged. It is located in Rikuzentakata city, Iwate Prefecture.

In this area, about 70,000 pine trees were destroyed by the huge tsunami, and only one tree still stood. However this pine died at December 2012.

Over the years the Takada Pine Forest, and the role of the trees planted, which was to protect the shoreline from erosion and deposition due to tsunamis, was studied\(^1\)\(^-\)\(^5\). The pine called ‘the Pine of hope’ or ‘the Miracle Pine’ which was the only tree to remain after the Tohoku Region Pacific Coast Earthquake’s tsunami became a symbol of both the purpose of

\*Faculty of Regional Environmental Science, Tokyo University of Agriculture, e-mail: t3awano@nodai.ac.jp

(C) 2015 City Planning Institute of Japan
http://dx.doi.org/10.14398/urpr.2.18
the forest as well as hope for the future. In recent years, the ways to recover sandy shoreline with forests were studied\(^6\). Because Japanese people philosophically have a strong connection to nature, this man made forest was a point of pride. Even though it is now destroyed, the area and what it represents continues to have value to the people. So much so, that many academics study the history of such man made nature projects. However it is not completely clear what the Takada Pine Forest’s intrinsic value is, as a scenic beauty spot throughout its history.

The aim of this paper is to define the forest’s intrinsic value, by clarifying the historic process of the formation of the pine forest, and discuss the effects of previous large tsunamis, as well as the current value and future vision of this historically scenic area. We hope to contribute to the rehabilitation work of the Takada Pine Forest. From the results of document analysis and field surveys, it is suggested that the Takada Pine Forest has retained its basic qualities and value through the recent disaster. In addition, this paper review the past results about the Takada Pine Forest, and tried to make clear the intrinsic value of the pine forest.

2. The planting pine trees in the Edo period and the formation of pine forest

2-1. Planting by Mokunosuke KAN-NO

The beach in Hirota Bay in Iwate prefecture was called ‘Tatsu Kami Hama’ in the Edo period which means ‘Standing God Beach’. The beach didn’t have any trees and any protection facilities against high waves and strong winds from Hirota Bay\(^8, 9\).

The strong sea wind blew up a lot of sand, big waves destroyed many farmlands. So many farmers tried to construct barriers for protection against high waves and strong winds, but they couldn’t succeeded\(^8, 9\). Tadamune DATE who was the second lord of the Sendai Domain investigated the situation of Tatsu Kami Hama, and Tsunamune DATE who was the third lord of the Sendai Domain decided to plant trees on the beach. In 1666, Sendai Domain officers walk around the beach, and evaluated the weaknesses for high waves and strong winds. Then, they ordered Mokunosuke KAN-NO who was a wealthy farmer in Takata village to plant pine trees on the beach. The size of the plantation was 440 meters by 220 meters\(^8, 10\).

Mokunosuke tried to plant pine trees by cooperating with many farmers in Takata village. He discussed with them how to complete this project and suggested a plan to share in the effort, depending on individuals financial means. Consequently, the lowest number of planted by one person was 40, and in the area where trees were not wealthy farmers contributed more. Mokunosuke planted about 900 pine trees. The tree planting project started from February 1667, and finished September of the same year. About 6,200 pine trees were planted. These
pine trees were Japanese red pine which grew in the field and mountains. Only about 3,000 survived\(^8,10\).

Mokunosuke change the seedlings to Japanese black pine, and continued to plant trees using his private wealth. He planted about 18,000 trees over three years\(^8,10\).

He passed away in 1671. However, his son Shichizaemon inherited Mokunosuke’s spirit, and continued planting pine trees. Then Shichizaemon and Hachisaburo who was Mokunosuke’s grandchild maintained the healthy forest\(^8,10\). Thus, three generation of the KAN-NO family laid the foundation of the Takada pine forest.

Figure 3. The Takada Village in 1822 (the pine forest is drawn left side) \(^11\)

Figure 4. The Imaizumi Village in 1822 (the pine forest is drawn left side) \(^11\)
2-2. Formation of the Imaizumi Pine Forest

Imaizumi village, which was located west of the Takata village, faced Hirota Bay. Big waves from the bay and water which flowed backward from the Kesen River destroyed a lot of farmlands, and rice fields were submerged by the flooding waters. In the 18 century, the pine forest planted by Mokunosuke KAN -NO had good results gradually. So, Sendai Domain decided to plant pine trees on the river mouth of the Kesen River and the west side of the beach of Hirota bay\textsuperscript{10}.

Sendai Domain ordered Shin-uemon MATUSAKA, who was a manager of Tamayama Gold Mine, to plant pine trees. He tried to plant trees on a sand hill of the river mouth. But, many trees died because of high salinity, high temperatures in summer and freezing sand in winter. However, Shin-uemon continued planting trees with his private wealth for over 20 years. His efforts made the pine forest. People called ‘Imaizumi Pine Forest (Imaizumi Matsubara)’. The two pine forest, Mokunosuke’ pine forest and Shin-uemon’s pine forest, were integrated into one big long pine forest. This was named the Takada Pine Forest\textsuperscript{10}.

3. Takada Pine Forest tunaism disasters

3-1. Tempo Sanriku Tsunami (1835)

In 1835, a big earthquake occurred off the Rikuzen, and a big tsunami hit the Takada Pine Forest. Many part of the pine trees died, but Takata village had little damage because of the protection of the pine forest. As a result, Sendai Domain replanted pine trees, and rehabilitated the pine forest\textsuperscript{12}.

3-2. Meiji Sanriku Tsunami (1896)

In 1896, a big earthquake occurred, and a tsunami hit the Takada Pine Forest again. The forest consisted of Japanese red pine and black pine, which were the main tree species, and some zelkova and cedar were mixed when the Tsunami hit. A lot of Japanese red pine trees died but Japanese black pine trees didn’t die. So, Japanese black pine trees were used to plant after the tsunami\textsuperscript{12, 13}.

3-3. Showa Sanriku Tsunami (1933)

A huge tsunami due to the big earthquake in 1933 hit the Takada Pine Forest again. The Takada Pine Forest again showed it was an effective protection against tsunamis.

It was thought that ‘the Takada Pine Forest might be destroyed by the tsunami, but it blocked 6meter waves which returned to the bay.’ (IWATE NIPPOU, 9th March 1933\textsuperscript{14}). Specifically, the area where pine trees grow well had little damage, but the area where pine trees didn’t thrive had a lot of damage and many buildings were washed away in that region.

Dr. Seiroku HONDA who was a famous dendrologist and landscape architect paid special attention to the effect of the Takada Pine Forest, and researched and collected data of the pine forest. Due to the tsunami, a lot of pine trees were planted around the Sanriku coast in Iwate and Miyagi prefecture. Almost all pine forests except the Takada Pine Forest around the Sanriku coast were created after 1933. This meant that the Takada Pine Forest contributed the improved protection against tsunamis and formation of a scenic beauty spot around the Sanriku coast\textsuperscript{15}.

All of the land of the Takada Pine Forest was under salt water, and 30 percent of the pine trees died due to the tsunami. However the local people replanted pine trees and rehabilitated the pine forest\textsuperscript{16}.

3-4. Chili Tsunami (1960)
The Takada Pine Forest had a lot of damage due to the Chili Tsunami on the 24th of May, 1960 which was caused by the Chili Earthquake. The tsunami pushed up the Kesen River first, and inundated Lake Furukawa and the Hamada River next. Then the ebb tide destroyed the center part of the forest which stretched for about 240 meters. 90 percent of the pine forest was under salt water, and 2,000 – 3,000 trees were destroyed. Furthermore, the pine forest’s seawall, which size was 300 meters in total length, 8 meters in width, and 3 meters in high, was destroyed. Many rice fields (about 150ha) behind the wall were under water. Some statues and souvenir shops and restaurants were destroyed. Some newspapers reported that the pine forest had lost its scenic beauty\textsuperscript{13,16}.

But about 1,500 members of Japan’s Self-Defense Forces cleaned up Lake Furukawa, and from early June, junior high school students in this city tried to remove destroyed pine trees and treated surviving trees. Lake Furukawa’s water protection construction finished on the 18th of June. Mr. ITO who was the mayor of Rikuzentakata city said that after construction has finished it would support the local people’s spirit\textsuperscript{17}. Local people replanted pine trees in the Takada Pine Forest again.

\textbf{Figure 5.} The change of land use throughout history and an overlay of the damage of the Tohoku Region Pacific Coast Earthquake \textsuperscript{18}.
4. Expansion of the scenic beauty spot

4-1. Looking to the pine forest by painters and writers

Minomushi Sanjin, who was from Gifu, traveled around Iwate and painted various landscapes from 1890 to 1895. He visited the Takada Pine Forest in 1891, and painted the view from Mt. Atago of the pine forest. This picture shows the integrated landscape including the curving pine forest facing Hirota Bay and the traditional houses and fields and the river. It was clear that the Takada Pine Forest was recognized as a certain scenic beauty spot.

Then, Takuboku ISHIKAWA, who was a famous Waka poet, visited the Takada Pine Forest in 1900 only 4 years after the Meiji Sanriku Tsunami. He came to Hirota Bay by ship, and praised the landscape of the pine forest from the bay. He was influenced spiritually by the landscape from Mt. Hikami to the pine forest.

Kyoshi TAKAHAMA, who was a famous Haiku poet, visited the Takada Pine Forest as a judge of “the 100 Best Sceneries in Japan” (Nihon Hyakkei) in 1927, and composed a Haiku which praised the beauty of the pine forest.

Thus, the scenic beauty of the Takada Pine forest was recognized by painters and writers.
Evaluation as a scenic beauty spot

The Takada Pine Forest was evaluated as a scenic beauty spot after the early Showa period. In 1927, the first was selected as one of the ‘100 Best Scenic Spots in Japan’. Then the pine forest was designated as a national site of Scenic Beauty in 1940. In 1964, the pine forest was designated as a special area of the Rikuchu-Kaigan National Park. Additionally, the pine forest was designated as one of ‘Japan’s 100 Best Pine Forests’ (1983), and ‘Japan’s 100 Best Beaches with White Sand and Blue Pine’ (1987), as well as ‘Japan’s 100 Best Public Parks’ (1989), all of which certified the Takada Pine Forest as a valuable Japanese scenic beauty spot.

We need to keep in mind that the above designation as a beauty spot was given in 1940, only seven years after the Showa Sanriku Tsunami (1933), and the national park designation was given in 1964 only four years after the Chilí Tsunami (1960). It is important that we understand the background of the above evaluations were supported by local people’s replanting of pine trees and their continuous maintenance of the pine forest. The Takada Pine Forest recovered to be a beautiful pine forest landscape.

The Takada Pine Forest’s relationship to the people of the region

Since the end of the Meiji period the Takada Pine Forest was recognized as a scenic beauty spot, and became a place of growing pride and attachment for the region. One of these symbols is the establishment of the Myouonji Temple in the forest. Chubeh YOSHIDA, who was from Kesen Town, selected the forest as the most suitable place to pray for marine safety and plentiful harvests, and built this temple on his property in 1922. But Chubeh disappeared when the priests’ quarters were built. The Myouonji Temple collected a following of people, and local people who were fishermen built a monument to Chubeh in the area in 1971.

A lot of monuments were set up in the pine forest in the Showa period. They were dedicated to Mokunosuke KAN-NO, Shin-uemon MATSUZAKA, Chubeh YOSHIDA. As well as monuments inscribed with the poetry of Takuboku ISHIKAWA and Kyoshi TAKAHAMA. These monuments were related to the forest directly. In this way, the setting up of monuments
in the pine forest showed that this place was a source of pride and attachment to the people in the region.

5. Examination of the value of the Takada Pine Forest as a cultural property

5.1. Designation of the national site of Scenic Beauty Spot (1940) and its criteria

The intrinsic value of the Takada Pine Forest was described as a magnificent pine forest in the Tohoku Region, with a white sand beach surrounding Hirota Bay. The landscape was celebrated for its scenery and beautiful mountains; which were Mt. Hikami and Mt. Raijin. I tried to evaluate the Takada Pine Forest’s intrinsic value which consists of tangible elements

<table>
<thead>
<tr>
<th>No.</th>
<th>Monument</th>
<th>Period</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>Monument Honoring Mokunosuke KAN-NO</td>
<td>1943</td>
<td>The monument honoring the achievement of Mokunosuke KAN-NO who planted pine trees in 1667-1671.</td>
</tr>
<tr>
<td>②</td>
<td>Monument Honoring Junpei SUGAWARA</td>
<td>1959</td>
<td>The monument honoring the achievement of Junpei SUGAWARA who pushed forward the modernization of the fishery.</td>
</tr>
<tr>
<td>③</td>
<td>Monument Honoring Chubeh Yoshida</td>
<td>1971</td>
<td>The monument honoring the achievement of Chubeh YOSHIDA who established the Myouonji Temple.</td>
</tr>
<tr>
<td>⑤</td>
<td>Tareidan-Tenjin Monument</td>
<td>1973</td>
<td>The monument honoring the Kindness of Tareidan-Tenjin(Tomekichi YOSHIDA) who was a well liked person in the region.</td>
</tr>
<tr>
<td>⑥</td>
<td>NINUMA Brother’s Poetry Monument</td>
<td>1940</td>
<td>The poetry monument which praises the Japanese Emperor by NINUMA brothers (Isamu and Saburo).</td>
</tr>
<tr>
<td>⑦</td>
<td>Kyoshi TAKAHAMA’s Poetry Monument</td>
<td>1946</td>
<td>The poetry monument which has Kyoshi TAKAHAMA’s poetry and talks about the scenic beauty of the Takada Pine Forest.</td>
</tr>
<tr>
<td>⑧</td>
<td>Takuboku ISHIKAWA’s Poetry Monument</td>
<td>1966</td>
<td>The poetry monument which has Takuboku ISHIKAWA’s representative poetry.</td>
</tr>
</tbody>
</table>

Figure 8. Position of Monuments in the Takada Pine Forest
Tangible elements which compose the intrinsic value of the Takada Pine Forest:
- Plants: Pine trees formed the magnificent pine forest. The pine forest had about 70,000 pine trees before the Tohoku Region Earthquake (2011). The pine forest had Japanese red pine and black pine, and their cross breeding pine.
- Landform: Geographical features included a sandbank formed by waves.
- Landscape: White sand beach and blue pine forest landscape integrating with Hirota Bay, Mt. Hikami and Mt. Raijin.
- Monuments: The monuments honoring of Mokunosuke KAN-NO, Shin-emon MATSUZAKA, and Chubeh YOSHIDA. The poetry monuments of Takuboku ISHIKAWA and Kyoshi TAKAHAMA.
- Temple: Myouonji Temple which was built to pray for marine security and a rich fishman’s harvests by Chubeh YOSHIDA in the Taisho period.

Intangible elements which compose the intrinsic value of the Takada Pine Forest
- History of the rehabilitation of the pine forest after tsunamis: The Takada Pine Forest was terribly damaged due to the Tempo Sanriku Tsunami (1835), Meiji Sanriku Tsunami (1896), Showa Sanriku Tsunami (1933), and Chili Tsunami (1960). Local people didn’t give up after these disasters, they rehabilitated the scenic beauty landscape by replanting pine trees. These activities are one of the intangible elements which compose the intrinsic value of the Takada Pine Forest.
- Local people’s pride and attachment for the pine forest: The Takada Pine Forest was maintained as a pine forest to protect against tsunamis and as a scenic beauty spot with white sand beach and blue pine trees. Since the 17century local people over many generations contribute to the forest. Thus, the pride and attachment for the pine forest was formed. These thoughts are one of the intangible elements which compose the intrinsic value of the Takada Pine Forest.

6. The intrinsic value of the Takada Pine Forest after the Tohoku Region Earthquake

The Takada Pine Forest has lost almost all of its tangible elements and its intrinsic value, due to the Tohoku Region Earthquake’s tsunami. Plants, pine trees, the landform of the east part of the forest, monuments and the temple were all destroyed. Only one pine tree still stood, however this pine tree died in December 2012. After the tsunami, the sandbank formation has gradually recovered. So not all of the tangible elements were lost.

In contrast, the local people’s pride and attachment for the pine forest, and the intangible elements, intensified. Because only one pine tree remained, it was called ‘the Pine of hope’ or ‘the miracle pine’, and
Figure 10. Geographical features after the Tohoku Region Earthquake’s tsunami.

Figure 11. The pine called ‘the Pine of hope’ or ‘the Miracle Pine’

Figure 12. The Symbol of Reconstruction ‘Hope of the Takada Pine Forest’
### Time line of the Takada Pine Forest

#### Background of the pine forest
- Coastal wind and sand from Hirota Bay
- Caused damage to farmland

#### Period

**Edo Period**
- **Tempo Sanriku Tsunami (1835)**: Many pine trees died. Takada village had little damage because of the protection of the pine forest.

**Meiji Period**
- **Meiji Sanriku Tsunami (1896)**: Many red pine trees died but black pine trees didn’t die. Japanese black pine trees were replanted after the tsunami.

**Taisho-the early Showa period**
- **Showa Sanriku Tsunami (1933)**: About 20,000 pine trees died. The area where pine trees grew well had little damage. But the area where pine trees were weaker had a lot of damage.

**The latter period of the Showa-Heisei Period**
- **Chili Tsunami (1960)**: 90% of the forest was under salt water. 2,000 – 3,000 trees died. She wall was destroyed. 150ha of farmland under salt water.

**The Tohoku Region Pacific Coast Earthquake’s Tsunami (2011)**: 70,000 pine trees destroyed. Landform altered. Monuments and the temple destroyed.

#### Disasters and Damage
- Planting pine trees in ‘Tatsu Kami Hama’ (1667–1680)
  - Mr. Mokunosuke KAN-NO and local people planted 6200 pines.
  - His son Shichizaemon continued to plant another 18,000 pine trees.
  - The pine forest was born.

#### Development and maintenance of the pine forest
- Formation of the Imaizumi Pine Forest (1720–25)
  - Mr. Shin-Uemon MATSUZAKA planted pine trees using his personal wealth.

- Sendai Domain replanted pine trees, and rehabilitated the pine forest.
- Rehabilitation of the pine forest by replanting pine trees.
- Construction of embankments.
- Continuous maintenance (Meiji-Taisho)
  - Dr. Seiroku HONDA researched and collected data on the pine forest.
  - Due to the reduced damage of the tsunami to the Sanriku area, many pine trees were planted in other areas such as Iwate and Miyagi.

#### Intrinsic growth value of the pine forest
- Barrier against high waves and strong winds.
- The birth of the Takada Pine Forest.
- Expansion of the barrier against high waves and strong winds.
- Integration between the Takada Pine Forest and the Imaizumi Pine Forest.
- Development of new farmland.
- 1896 tsunami had reduced effects.
- Recognition of its Scenic Beauty by Minomushi Sanjin (1890’s).
- Designation as a national site of Scenic Beauty (1940).
- Japan’s 100 Best Scenic Spots in Japan (1927).
- Japan’s 100 Best Beaches with White Sand and Blue Pine (1987).
- Japan’s 100 Best Public Parks (1989).

#### Conclusion
- Considering a rehabilitation plan for the region and the pine forest.
- Preservation of ‘the Pine of hope’ as a regional monument.

---

*Figure 13. Time line of the Takada Pine Forest*
this pine tree encouraged many Japanese people to continue to work through the disaster. In addition, this pine was also used as a symbol of the rehabilitation in Rikuzentakata city, and local people’s pride and attachment for the pine forest has become unshaken.

The Takada Pine Forest has been developed and managed by local people’s activities since the 17th century. This has been passed down over many generations. Therefore, it can be said that the Takada Pine Forest has never lost its intrinsic value and has kept its potential worth, as long as the will to preserve and rehabilitate the forest will continue existing from generation to generation (Fig. 13).

Acknowledgement

I would like to show my greatest appreciation to Mr. Tsuyoshi Hirasawa whose comments and suggestions were of inestimable value for my study. Special thanks also goes to Mr. Barry Miller who gave me invaluable comments and warm encouragements.

References

1) Fumihito HONDA: The Takada Pine Forest as a white sand and blue pine which protected the tsunamis: Green Age Vol.33 No.2, pp.27-31, 2006
2) Enzo KONNO, NOBU Kitamura, TAMIO Kotaka, JUN Kataoka: Erosion and Deposition due to the Tsunami caused by the Chile Earthquake on May 24, 1960: the Tohoku Geographical Journal Vol.12 No.4, pp.120-127, 1960
8) Rikuzentakata City History Editing Committee : Rikuzentakata City History Vol.4 Industry: Rikuzentakata City, 1996
9) Rikuzentakata City History Editing Committee : Rikuzentakata City History Vol.1 Nature: Rikuzentakata City, 1994
10) Rikuzentakata City History Editing Committee : Rikuzentakata City History Vol.9 Industry: Rikuzentakata City, 1997
11) Eiji NAMURA: Report II from damaged region by the Tohoku Region Earthquake’s: 2011
12) Takanori ODA: People who developed seaside forests in Japan, Hokuto publishing company, 2003
13) Rikuzentakata City History Editing Committee : Rikuzentakata City History Vol.8
War/Disaster/Welfare: Rikuzentakata City, 1999

14) IWATE NIPPOU, 9th March 1933


17) The Research Committee of the Kesen Area: Commemorative issue of Chili Tsunami, 1961

18) The University Museum, The University of Tokyo: The land use change of the tsunami stricken area caused by the Tohoku Region Pacific Coast Earthquake: http://umdb.um.u-tokyo.ac.jp/DChiri/tsunami_zoom_2/taro.php (last accessed on November 17th, 2014) [in Japan]

19) Iwate museum: Achievements of the painter who took a trip to Iwate, 2007


