

Preserving Coal Mining Heritage and Regional Revitalization - A Case Study on XinPingXi Taiwan Coal Mine Museum

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Executive Summary

Pingxi coal mines had long served as Taiwan's main source of coal production. An industrial complex of settlements and businesses formed around this dense network of mines, which eventually gave rise to a rich mining culture and community that lasted for many years. However, as time went on, mines became exhausted, communities slowly faded away and along with them, the culture and history behind a once prosperous mining town.

For decades, XinPingXi Taiwan Coal Mine Museum (originally XinPingXi Coal mine) has systematically preserved its own coal mining heritage and documented its history. This is achieved through physical preservation and maintenance of old mining sites and equipment, including functional electric locomotives and several mine trolleys, extensive research and record keeping of historical accounts from past miners and people who lived or grew up in the mining communities. XinPingXi Taiwan Coal Mine Museum intends to utilize this wealth of knowledge and carefully maintained historical assets, to take its visitors on an immersive educational journey into the past.

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1. Analysis of Pingxi Coal Mine Cultural Development

1.1 Taiwan Coal Mining Cultural and Historical Background

Coal mining in Taiwan began at the end of the Qing Dynasty c. 1876, initiated by Governor Baozhen Shen, in Keelung's Badouzi region.

Large scale coal mining in Pingxi region started in 1918, by the mining company Taiyang Mining Co. Ltd., founded by Mr. Yun-Nian Yan. The company financed and invested significant resources in the coal mining operation. A 12.9 kilometer long railway was laid down that greatly improved accessibility to the area and thus marked the beginning of a prosperous era of coal mining in the Pingxi region. This was the first large-scale mining operation in Taiwan.

At the peak of the coal mining era, Taiwan had approximately 500 mines that accounted for 70-80% of Taiwan's energy production. This was significant as at the time, Taiwan lacked the ability to purchase energy resources from other nations, and therefore needed to be self-sustaining, and coal mining was the solution.

As mines depleted over time, mining towns began to dwindle, infrastructures that once connected this vast network of mining settlements were taken down or simply abandoned. XinPingXi Taiwan Coal Mine Museum's first director Mr. Yung-tsang Gong founded the museum in hopes of preserving this piece of important history for future generations. Under director Gong, 1.283 kilometers of mining tunnel and approximately 1.2 kilometer of mining railway and trail connecting XinPingXi coal mine to Taiwan Railway was preserved, and with that,

the complete transportation route of the old mining operation.

1.2 Current State of XinPingXi Coal Mine

XinPingXi coal mine opened its mine pit in 1965. At the time, the mine was not connected to Shifen Station nor any of the nearby settlements. Over the years as operation expanded and coal production increased, roads and railroad tracks were built to accommodate an increased demand for coal transportation and ease of access to the mine.

Completed in 2014, the Ji-fu Highway extension leveraged these existing infrastructure and significantly increased Pingxi region's accessibility for the public. This would greatly increase tourism traffic in the area, most notably in Shifen.

2. XinPingXi Coal Mine Production Analysis

2.1 XinPingXi Coal Transportation Route Survey and Equipment Inventory

In order to accurately depict Pingxi's coal production process from the early days, XinPingXi Taiwan Coal Mine Museum has spent years surveying the land to trace the old coal transportation routes, as well as creating an inventory of all the mining equipment used during that time. Several significant findings and recoveries from this effort include the horizontal tunnel, the mining rail system that was responsible for transporting coal as well as connecting the mine to Shifen Station, and the old drum hoist and shaft system, which were all found to still be in fine condition.

In addition to the survey findings, the museum has also kept and maintained the original electric locomotives imported from Japan from 1937, including a Hitachi made one. This was well ahead of its time as it wasn't until 40 years later that Taiwan Railway adopted the use of electric locomotives for its fleet. Nowadays, visitors can ride around the old transportation route in carts pulled by the very same locomotive that once brought miners and coal in and out of the mines.



Figure 1. Historical coal transportation route survey drawing



Figure 2. The original electric locomotive made in Japan from 1937.

2.2 Archiving Historical Records

XinPingXi Taiwan Coal Mine Museum is the only museum in Taiwan that has managed to keep the original mining transportation route functional. In addition to keeping and maintaining physical assets of significant historical value, the museum is also actively collecting any relevant documentations, both written and verbal accounts of historical events in and around the Pingxi coal mine. These records would be cross referenced and verified for historical accuracy with subject matter experts. Upon verification, all this information is organized and archived physically and electronically to ensure its preservation and data integrity.

Making these documents available electronically will allow for easier distribution and increase ease of access to this important era in Taiwan's history.

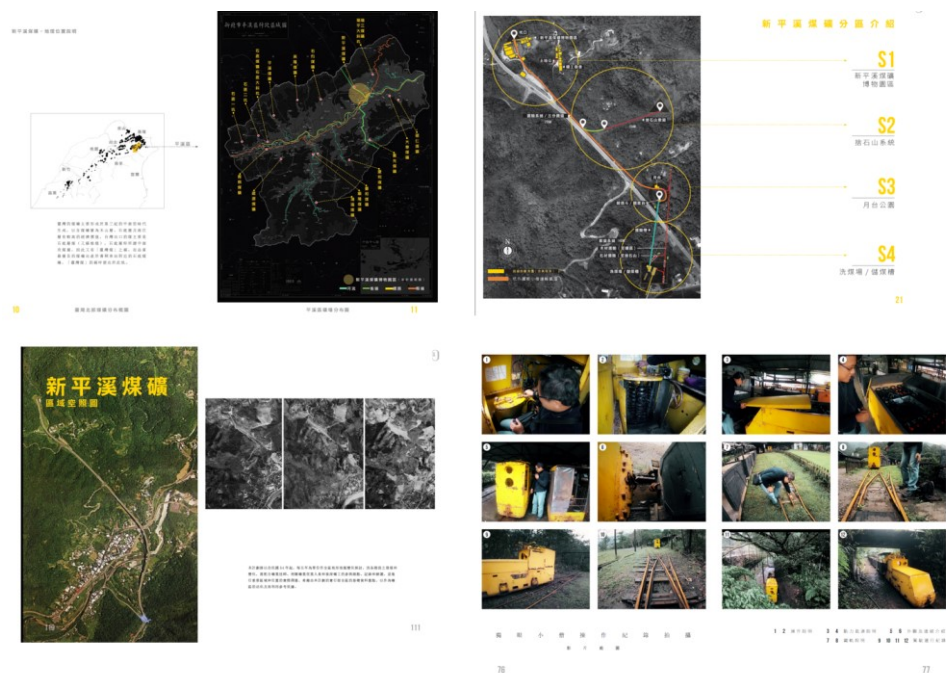


Figure 3. Mining site and transportation system survey.

2.3 Interviews

In addition to land surveys, archiving of historical records and maintaining historical assets, XinPingXi Taiwan Coal Mine museum has also conducted interviews with many of the people who had worked in the mines and lived in the Pingxi or neighboring mining communities to document firsthand experience what it was like living in Pingxi during the height of its coal mining operation. Interviewees are asked questions specific to their roles. Interviews are filmed and documented in writing, which are also subject to review by experts for accuracy and eventually would make their way into the historical archives kept by the museum.



Figure 4. Filming of interviews with retired miners or people who worked, lived or grew up in the mining community.

3. XinPingXi Taiwan Coal Mine Museum Operation Highlights

3.1 Systematic Preservation

XinPingXi Taiwan Coal Mine Museum's approach to preserving its coal mining heritage can be broken down as follows:

I. Site surveys

XinPingXi Taiwan Coal Mine Museum has confirmed many of the old mine's operational sites, including the mining tunnel, the railway system, slag heap sites, coal preparation plant, and conveyor system. Any mining equipment found have also been maintained and kept at the museum.

II. Historical asset maintenance

The Hitachi electric locomotive was imported in 1937 to pull mine trolleys. It was also one of the earliest electric locomotives in Taiwan as steam locomotive was the standard at that time. Today, this electric locomotive is one of the main attractions featured in the museum's guided interactive tour and is the only place to see this locomotive in motion. The electric locomotive has been nick named "One Eyed Monk" due to its unique circular opening design on the front.

Furthermore, 1,283 meters of mining tunnel and 860 meters of railway that



Figure 6. Shifen Station (Aerial photo)

Out of all historical coal mining locations in Taiwan, Pingxi coal mine village is the one that has been thoroughly preserved, making this an ideal location for a tourist attraction as well as a prime site for mining industry conferences. The existence of Pingxi coal mine village is an important part of Taiwan's history on a local and national level.

Xinpingxi Taiwan Coal Mine museum will continue with its work in the preservation of this heritage site and its cultural values through tourism and education. The guided interactive tour is an important part of this learning journey for both domestic and foreign visitors to learn about Pingxi's coal mines and its cultural impact and socioeconomic contribution in Taiwan during the early days.

3.3 Cultural Tourism Integration

Aside from Pingxi's coal mining culture and historical aspect, Pingxi is surrounded by vast natural habitats. In the summer months, cool evening countryside views are adorned with fireflies and the sound of singing cicadas provides a much needed break from the hustle and bustle of everyday grind for many people. Each year, Pingxi draws tens of thousands of visitors from around the world for the Sky Lantern Festival and its natural beauties. However, the majority of the guests overlook the rich culture and history hidden beneath all the picturesque sceneries.

Xinpingxi Taiwan Coal Mine Museum aims to integrate Pingxi's coal mining heritage into existing tourist attractions. Through collaboration with local communities and tourism services, the museum looks to rebrand and bring in local business opportunities and to extend guest experience beyond the beautiful Pingxi landscapes, to provide an opportunity to explore these lands and discover its rich history and culture.

3.4 Regional Revitalization and Future Vision

Xinpingxi coal mine is part of the Shifen township. Back in the 1970s, Shifen Elementary averaged 1200 students, and the coal mine employed well over 500 miners. Along with other service providers in town, this was a rather sizable community for that period.

Generally speaking, larger cities and towns often do not offer a sense of community. However, such was not the case for Pingxi. A career in mining was not an easy one, it is often filled with many dangers with very little reward in return. But through this hardship, a strong sense of community and lasting bonds were formed. Everyone looked out for one another and worked together to overcome any challenges that entailed with the mining industry.

As the mining industry diminished over time in Pingxi, so did this tight-knit community along with its culture and history. As unfortunate as this may be, this is all too common for mining communities around the world. When mines are depleted or no longer profitable, loss of jobs would soon follow and miners are forced to look elsewhere for employment. Once thriving cities soon became ghost towns. It is up to the local government to plan and repurpose these sites where these mines and communities once stood. Local resources alone are simply not enough to bring back a once booming city.

Taiwan's rural regions suffered a significant decline in population in recent decades, Pingxi is one of the regions with the greatest decline. To counter this trend, in 2019, Taiwan's National Development Council had been alerted to the situation and has since devoted resources and proposed or implemented policies to assist with the regional revitalization project. Thus, Xinpíngxi Taiwan Coal Mine museum collaborated with the local government and communities to explore various avenues to revitalize Pingxi.

In 2020, XínPíngXí Taiwan Coal Mine Museum also joined Taiwan Ministry of Culture's initiative to promote Taiwan's cultural route. Through this initiative and working with local communities, Pingxi will see its mining heritages preserved and local communities thriving once more.