

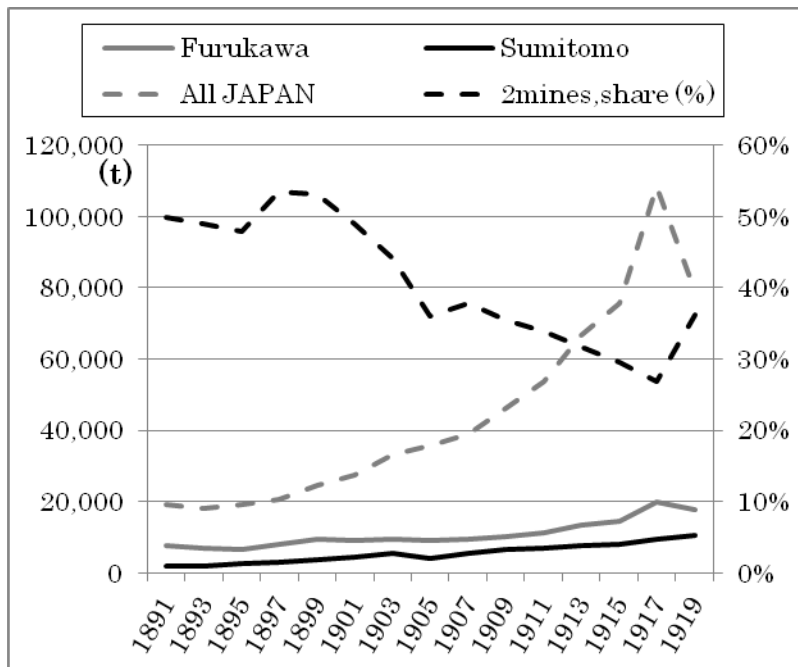


### (1) Historical background

There were two major copper mines in Japan in the Meiji period: the Ashio copper mine of the Furukawa *zaibatsu*\* in Tochigi prefecture and the Besshi copper mine of the Sumitomo *zaibatsu* in Ehime prefecture. At one point in the Edo period (1603-1868), Japan produced the most copper in the world. Copper production continued to be an important industry in the following Meiji period, the time of industrial revolution in Japan. [Fig. 2] shows the change of the amount of copper production of the two copper mines during the Meiji period.

\**zaibatsu*: the great family-controlled banking and industrial combines of modern Japan.

Fig. 2 the change of the amount of copper production



(source)Statistics, Ministry of Economy, Trade and Industry

### (2) Mine pollution problems

Copper mining and refining devastated the neighboring areas due to smoke hazard, cleared forests for providing timber to build mine tunnels, outflow of poisonous mineral water, etc. Refining used to be halted during the

rice-growing season in the pre-industrial revolution era of the Edo period. However, agricultural damage and environmental destruction increased in the following Meiji period, and mine pollution problems became serious as the economy grew. Multiple riots and protests of farmers took place at the Ashio copper mine and the Besshi copper mine.

### (3) The Ashio mineral pollution case

As the damage became increasingly serious, the local communities were devastated at the Ashio copper mine. For example, Matsuki village was abandoned in 1902, and so was Yanaka village in 1907. A local legislator, Shozo Tanaka (1841-1913), in an attempt to rescue the victims of the pollution and forced relocation, took a bold action; he resigned as a lawmaker in 1901 and made a direct petition to the Emperor Meiji (1852-1912; reign 1867-1912). Tanaka continued resistance to the last minute by remaining in the Yanaka village where the government had ordered the forced relocation of all residents.

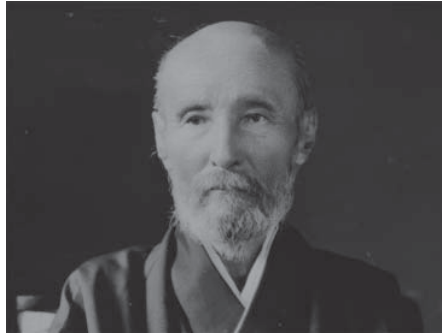
Some critics compare the Ashio case with what happened after the failure of the Fukushima nuclear plant in March 2011 when the residents of the neighboring areas had to accept forced eviction, and point out, “In order to advance modernization, a social structure where no one takes responsibility even if there are problems was created, and is still dominant in the society. The government did not take responsibility for the Ashio case nor for the Fukushima case. Companies did not take responsibility for the two cases either by saying that they had to follow the national policy.”

Tanaka in his diary for June 17, 1912 wrote, “True civilization should not ruin mountains, rivers and villages, and should not kill people.”

### (4) The Besshi smoke hazard case

Unlike the Ashio case, the manager of the Besshi copper mine, Teigo Iba, led intensive efforts of countermeasures against mine pollution since 1894. Iba focused on the following three points [Fig. 3]:

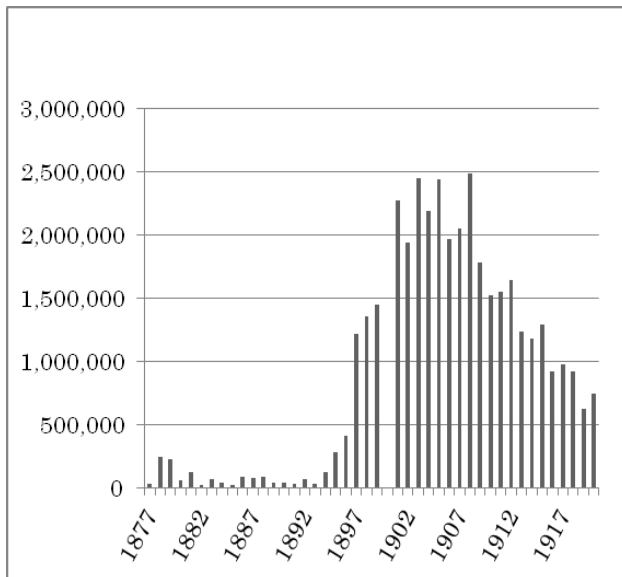
Fig. 3: a photo of Teigo Iba



(source) Sumitomo Historical Archives

- ① In order to prevent smoke hazard, the company relocated the smelter to an uninhabited island in 1905 by investing two years' worth of its net income.
- ② The company conducted a large-scale afforestation every year, an increase from 60,000 to 1.9 million trees annually. [Fig. 4] It was far ahead of its time. In comparison, under an NPO's slogan "Let's plant a million trees in the bare mountains of Ashio," local residents spanning from elementary school children to the elderly are currently working on planting trees with the coalition of local government, citizens and companies at Ashio. [Fig.5]

Fig. 4: the transition in numbers of planted trees



(source)sueoka(2010)

Fig. 5: a photo of NPO's greening project of Ashio



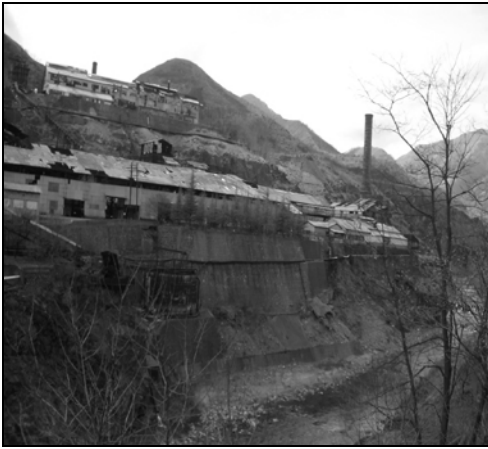
(NPO) Grow Green in Ashio(1996～)  
the number of participants:15410  
the number of young plant trees:66.200

③In order to understand the current situation for environmental measures, scientific survey of the Besshi region was conducted and a weather station was opened in 1899. However, inadequate technology of weather observation caused even greater smoke hazard after the relocation of the smelter to an uninhabited island in 1905. According to the agreement with the residents, the successor of Iba implemented measures including (i) compensation for damages, (ii) production limits, and (iii) improvement of chimneys (six chimneys, tall chimneys). In spite of all the above measures, sulfur dioxide smoke problems were not resolved until the company built a sulfur dioxide neutralization plant on the island in 1939, 34 years after the relocation.

#### (5) The difference between Ashio and Besshi

The mountains in Ashio are still ruined, whereas Besshi has become a lush region today. [Fig. 6]. While both had a copper mine, why Ashio and Besshi created a stark contrast in terms of the damage? The reason lies in the difference of voluntary corporate initiatives between the two companies. Specifically, the following points are significant.

Fig. 6: photos of Ashio and Besshi



(Ashio)



(Besshi)

① Characteristics of the management of Sumitomo *zaibatsu*

Founded in 1590, the Sumitomo *zaibatsu* has its history of over 400 years, the oldest conglomerate in the world beyond the Rothschild family. The three characteristics of the group are (i) separation of ownership and management, (ii) emphasis on compliance, and (iii) decision making process.

(i) Separation of ownership and management

The Sumitomo family owned the company, but its management was entrusted to people other than the Sumitomo family in the modern era. “The king (Sumitomo) reigns, but does not govern,” so to speak.

(ii) Emphasis on compliance

“The Sumitomo family law” (196 articles of family code) was established in 1882. It specified in detail (i) codification of the traditional spirit and (ii) organization and operation of the Sumitomo group including the Besshi copper mine. Sumitomo family law has been carried over to the company regulations that were enacted in 1928. Thus, the company has been managed based on the Sumitomo family law.

(iii) Distinctive decision-making process

For crucial management decisions, there was a tradition of openly discussing matters among executives. Since relocating the smelter to an uninhabited island was a major undertaking that would affect the future of the company, the following discussion was made between Iba and his predecessor, Saihei Hirose (1828-1914).

(Reference 1) Hirose's argument:

- Damages other than smoke hazard should be also considered.
- Relocation of the smelter to the island is financially problematic and could also hurt the trust of local communities.
- Enormous costs of relocation should be used for compensation for damages instead.
- The relocation might increase the damage even further.

(Reference 2) Iba's objections:

- Destroying trees in the mountain and compensating for the damage is not the right way to go.
- It is impossible financially and morally to buy up all the damaged lands.
- Relocation of the smelter is effective to prevent smoke hazard. The new location would also provide a larger site for the smelter, and is more convenient for shipping.
- In order not to damage the economy of Niihama by the relocation of the smelter, special care should be made in terms of operations and employment.

We can compare the above Besshi case with the Ashio case where Ichibei Furukawa (1832-1903) founded the Furukawa group in 1875 as a sole proprietor. Furukawa obtained support from an influential politician, built a *zaibatsu* in one generation, adopted the second son of the influential politician, and appointed the adopted son as his heir.

② Differences of personality and philosophy of the management

(i) Management of the Besshi copper mine (Note: The Sumitomo family owned the company.)

- Saihei Hirose (the first CEO 1877-1894). Worked in the mine from the age of 11. Started as an employee in the company.

Motto: "I will devote myself to grow new industry, and share the profits with tens of millions of people." (Unless corporate activities make the society prosperous, the company cannot make profits.)

- Teigo Iba (the second CEO 1894-1904). A former judge.

Motto: "Wise men pursue and make profits, but they should do so with moral responsibility." (The goal of the company should be making profits but, in so doing, the company should not do anything ethically incorrect.)

"It is our responsibility to revive the mountain of the Besshi copper mine and return it to nature."

- Masaya Suzuki (the third CEO 1904-1922). A former bureaucrat.

Motto: "I am determined to build the facility to remove smoke hazard by spending more than the amount of compensation." (I want to aim to fully resolve the problem by implementing the facility to remove smoke hazard, instead of simply compensating for the damage.)

#### (ii) Management of the Ashio copper mine

- Ichibei Furukawa (the first president 1875-1903). Started the business in 1875 as the sole proprietor. Allegedly, his wife was distressed at the mine pollution damages caused by the company, and committed suicide.
- Junkichi Furukawa (the second president 1903-1905). The second son of Munemitsu Mutsu (1844-1897), a politician and Minister of Foreign Affairs (1892-1896). Adopted by Ichibei Furukawa. Incorporated the business in 1905, and appointed Takashi Hara (1856-1921) as the vice president. Incidentally, Hara became the Japanese prime minister in 1918.

#### 【Summary】

What kind of contemporary issues could we find in the early examples of CSR in the Meiji period?

- ① It is necessary to take voluntary measures according to the rules rather than

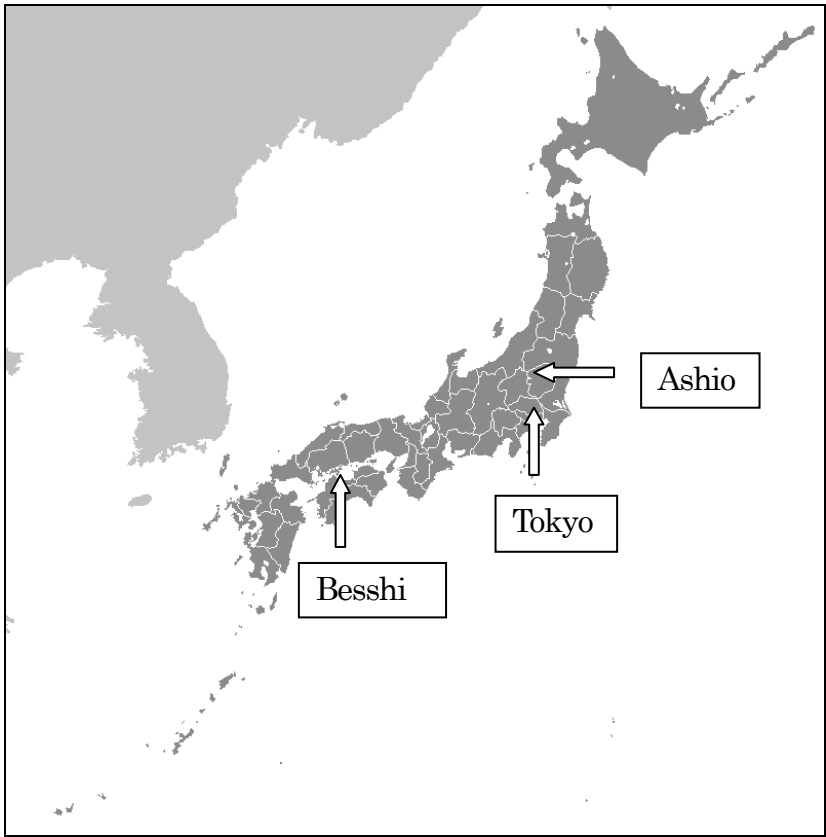


letting the market decide. We might say that voluntary industry rules could have prevented the spread of damages in the two cases discussed above.

- ② It is important to implement the system that enables participation of multiple stakeholders in the decision making process. The Besshi case of the Sumitomo group shows an indirect form of stakeholder engagement by hiring executives from outside the company.
- ③ It should be noted that the history and nature of the company's management could affect its engagement in CSR.
- ④ Despite Iba's commitment to CSR, it took a long time to resolve the smoke hazard problem. We should note that the innovation of pollution control technology finally resolved the issue.
- ⑤ Environmental pollution and employment have become serious problems in East Asian countries. It is important to utilize market governance mechanism such as supply-chain CSR instead of market mechanism to resolve the problems.

#### (REFERENCE)

- Teruaki,Sueoka(2010)"The Development and Antipollution of Sumitomo Besshi Copper Mines" *Environmental Research Quarterly* ,No.156,pp62-70, The Hitachi Environment Foundation
- Kazuo Nimura(1997),"The Ashio Riot of 1907—A Social History of Mining in Japan" Duke University Press
- Higuchi K.,Kitazawa K. and Hashimoto N. (eds.) ,(2011),An Introduction to Green Management of Technology(MOT), Chuokeizai-sha,Tokyo
- Higuchi K., Miki T. and Shirai N,(2010),Studies of Sustainable Enterprise, Chuokeizai-sha,Tokyo
- Higuchi K., Fujita S. and Shirai N, (2007) Business and Environment, Kenpaku-sya,Tokyo
- Higuchi K. and Molteni C. (Eds.), (1996) ,Lo Sviluppo Economico del Giappone e il Ruolo del MITI, EGEE S.p.A.,



source:craftmap (<http://www.craftmap.box-i.net/>)