The Role of Those Living at the Foot of the Volcano
Handing Down the Wisdom to the Next Generation

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Shikotsu-Toya National Park  Designated on May 16, 1949

Lake Toya & Mt. Usu Area
The Historical Sketch of Mt. Usu Volcanic Activities

- About 110,000 Years Ago: Formation of Toya Caldera
- About 50,000 Years Ago: Formation of Nakazima Island (domes)
- About 20,000 Years Ago: Birth of Mt. Usu storatovolcano
- 7,000~8,000 Years Ago: Collapse forming debris avalanche deposit
  (Mt. Usu lost its summit and entered into a period of dormancy)

-★ 1663★ Reawakening & large eruption. (The birth of Ko-Usu lava dome. Some casualties.)
-★ Around the end of 17th Century★ (No written records, but volcanic deposits found.)
-★1769★ Pyroclastic flow eruption (Some houses burned.)
-★1822★ Major pyroclastic flow eruption. (The birth of Ogariyama cryptdome. 103 casualties, settlement relocated.)
-★1853★ Pyroclastic flow eruption. (The birth of O-Usu lava dome. Residents evacuated.)
-★1910★ Eruption at the northwestern flank. (The birth of Meiji-Shinzan cryptdome. Successful evacuation, initiation of modern volcanology by Prof. Oomori. 1 casualty from hot lahar.)
-★1943~1945★ Eruption at the eastern flank. (The birth of Showa-Shinzan lava dome. Mimatsu Diagram, National Monument, 1 casualty from ash fall.)
-★1977~1978★ Eruption at summit. (Birth of Usu-Shinzan cryptdome. 3 casualties from lahar)
-★2000★ Eruption at the western flank. (The birth of 2000 Shinzan. No injuries or casualties due to successful evacuation.)
Mt. Usu had erupted four times in the 20th century:

- 1910
- 1944
- 1977
- 2000
29,000 peoples of St. Pierre city was killed except one, owing to the pyroclastic flow of Mt. Pelee.
Izu Torishima Island, all islander except one was killed by major eruption.
Initiation of modern volcanology by Prof. Oomori at this events.

In 1910 eruption, new cryptodome named Meiji-shinzan was born.
He spent his life as a normal postmaster until early evening of December 28, 1943.
MIMATSU’s Unique Method for “the Sequential Sketches”
Before the Eruption

May 1, 1944

First Eruption

June 23, 1944

O-Usu Dome

Before the Eruption

May 1, 1944

First Eruption

June 23, 1944

O-Usu Dome

Before the Eruption

May 1, 1944

First Eruption

June 23, 1944

O-Usu Dome
Mimatsu Diagram

September 20, 1945
The explosion occurred in a wheatfield on June 23, 1944, continued sporadically until the end of December.
Fault lines around Mt. Usu (Mimatsu Hypothesis 1948)

The major crater of Mt.Usu eruption year 2000
Full paper by Mimatsu, named "Diary of Mt. Showa Shinzan formation", published 1962

The second edition (1995)
Oct 24, 1982 ~ Feb 28, 1983 (8 lectures and 1 field excursion)

Volcano Learning Program for Adults

Promoted by Sobetsu Educational Boards
Supported by Usu Volcano Observatory of Hokkaido University
By reason of handing down the wisdom to the next generation

Handing down the history of the coexistence with the volcano

The Field Learning Program for Kids Since 1983
The Eruption is not only Disaster but also Benefits

Destructive and regenerative power of the earth
The History of Development on Toya-ko Hot Spa. Area
K-a crater (left) and K-b crater (right) was opened near the town.

June, 2000
Usu 2000 Eruption
Eruption in 2000, with no casualties
On 22 August 2009, Toya Caldera and Usu Volcano Geopark was designated as the first Japanese Global Geopark.

The concept of our Geopark:
- The Ever-Changing Earth
- Coexistence with the Volcano
Disaster Repeats!

The map of the crustal movement in 1910 eruption.
This big Hospital was crashed after crustal movement in 1977.
The Geo-Heritage, 2000 eruption memorial park and trail (foot-path)
The pier of National Railway was raised up about 30m high.
Masao MIMATSU lived to see the 3rd time Usu eruption in his life. 89 years old
The “Toya-Usu Volcano Meisters” system began in 2008 for grooming of new leaders in the next generation for disaster prevention in Toya-Usu area. As of Oct. 2013, 23 Meisters were certified.
What is need, for handing down?
Should we only tell about the terror and the tragedy?

Earthquake and Eruption = Natural Phenomenon
Natural Disaster = Social Phenomenon
Volcanic Eruptions and earthquakes are inevitable on the active Planet Earth
Earthquakes and eruption scale ≠ Disaster scale

◆ The main character is the earth. Human beings are only supporting character. Recognizing that humans are but a small part of Earth’s nature.

◆ The most important thing is we recognize that we can not stop the natural disaster. → Build a culture of disaster prevention by learning from past disasters.