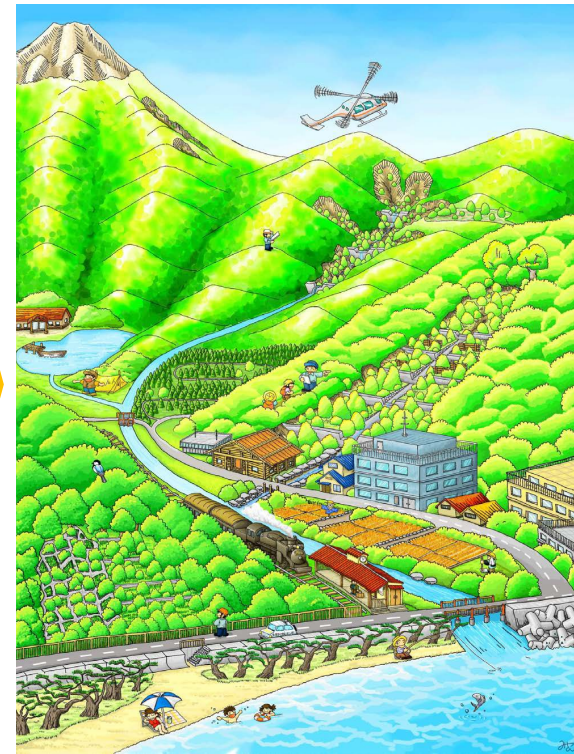
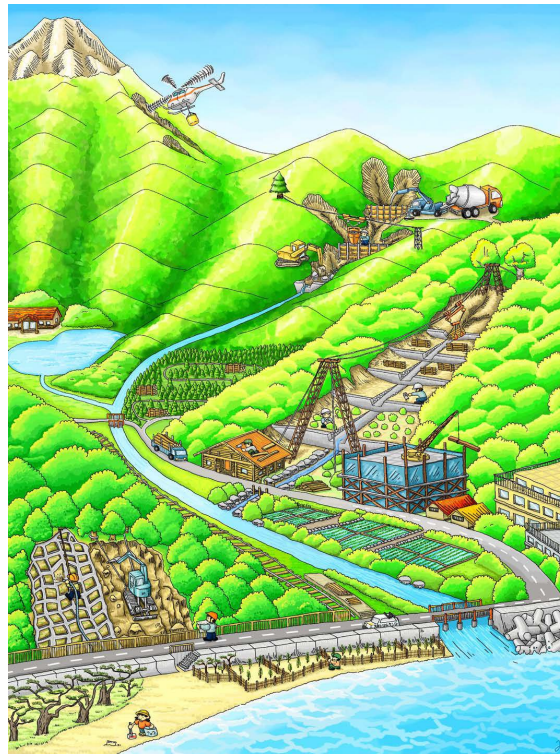
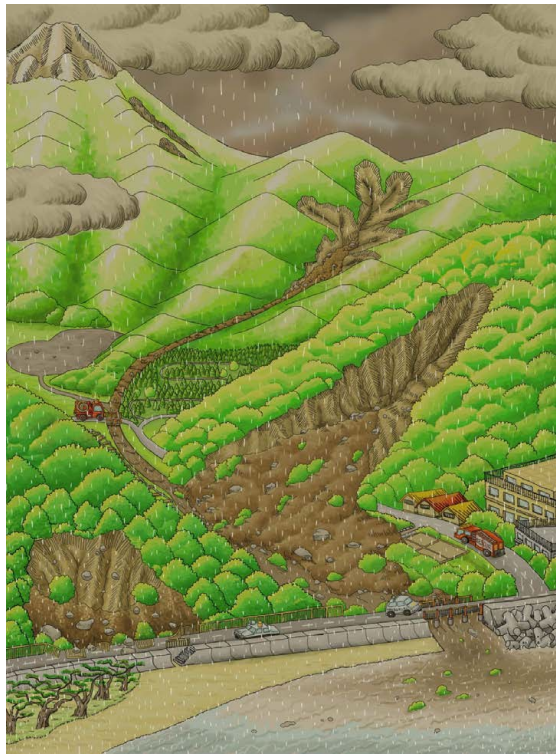


Efforts and results of mountain area conservation by Forestry conservancy projects



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1. Mountain Area on the Edo Period(19 century)

Ukiyo-e shows,,,

←1833-1834
(Nissaka pass, Shizuoka Pref)
by Hiroshige Utagawa
(1797-1858)



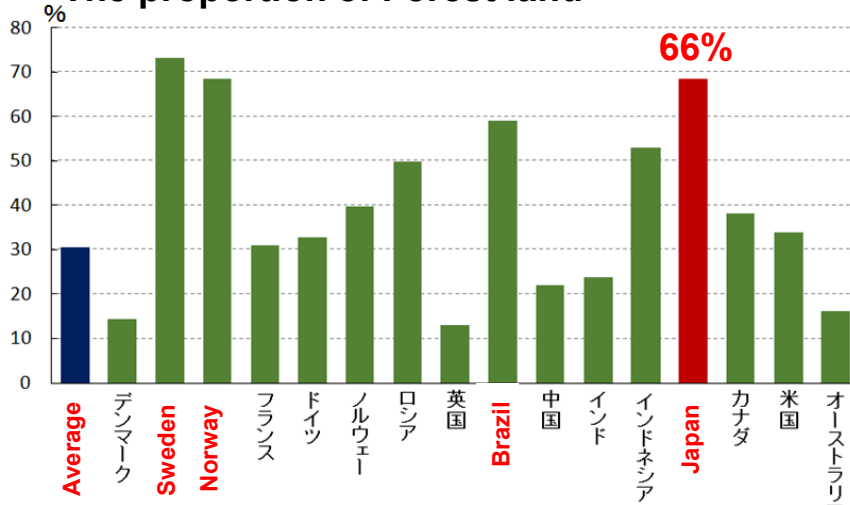
Trees were only along roads, sparse on mountain

1868(Shirakawa, Fukushima Pref)→

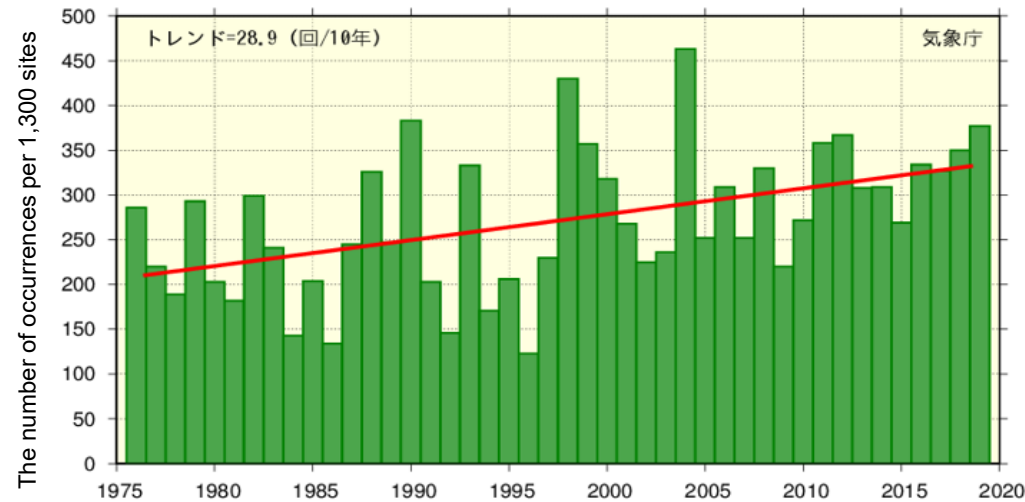
2. Increasing Risk of Natural Disasters in mountain Area

- ✓ Large Area of Forest land in Japan
 - ✓ The number of heavy rain (50 mm/h or more) has been increasing
 - ✓ Japan is a country with a lot of natural disasters
- Only 0.25% of Territory area on the World, but more than 20% of Earthquake, 7% of Volcano....etc

■ The proportion of Forest land

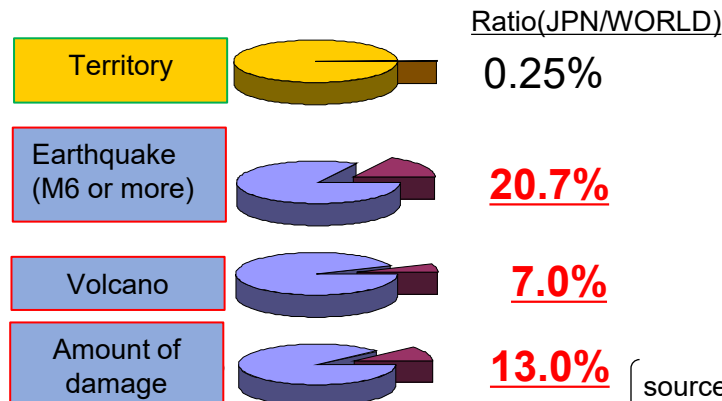


■ The number of heavy rain (50 mm/h or more)



(Based on the data of Ministry of Education, Culture, Sports and Technology and The Japan Meteorological Agency)

■ High Frequency of Natural Disaster



M6.7 Earthquake, Hokkaido, 2018

(source: Defense of Japan, 2008)

3. Forestry conservancy measures against Natural Disasters in mountain Area



- Regulating forestry-related and other development activities based on the Protection Forest system
- Promoting CHISAN technology, preventive and restorative countermeasures of forest conservation works

■ Protection Forest System

For maintaining and enhancing the function of forests such as watershed protection and disaster prevention, regulate

- its conversion into other land use
- method of cutting, maximum rate of thinning, planting(over 3,000 trees/ha)



Watershed protection forest

■ CHISAN technology

Forest Conservation with Civil Engineering

For maintaining and restoring the function of forests, Chisan technology install

- forest conservation facilities such as check dam, hillside work(wall work, terracing work ,,, etc)
- planting



Hillside collapse



8yrs passed



35yrs passed

CHI SAN

治 山

Maintain Mountain

Prevention and mitigation of natural disaster damages in mountain Area by enhancing the function of forests