



“Sustainable Forest Management for the mitigation and adaptation against climate change”

# Sustainable Forest Management Strategies for Sediment Disaster Prevention and Mitigation and their Expansion to Developing Countries



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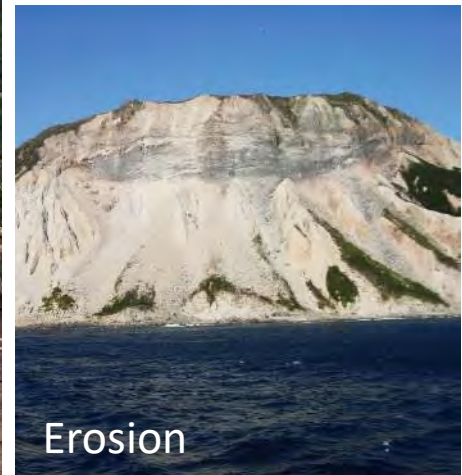
# SEDIMENT DISASTERS IN JAPAN



Landslide



Debris flow



Erosion



Rock falls



Destroyed cars by landslide

# JAPANESE OLD PAINTING “UKIYO-E”

Forested mountains were **not represented** in painting 200 years ago



By Utagawa Hiroshige (1797-1858)

Ashio, Japan

Devastated in 1955

**F-DRR**

Forest-based  
Disaster Risk Reduction

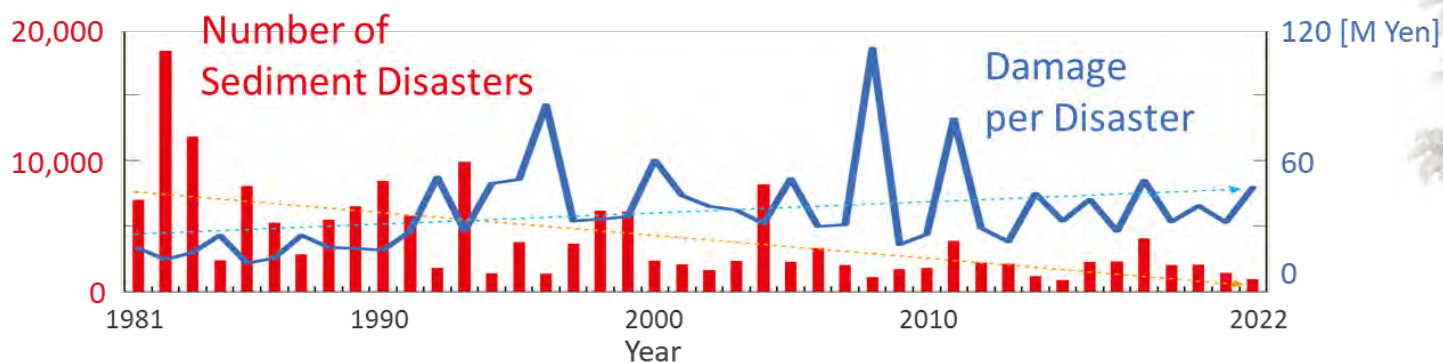
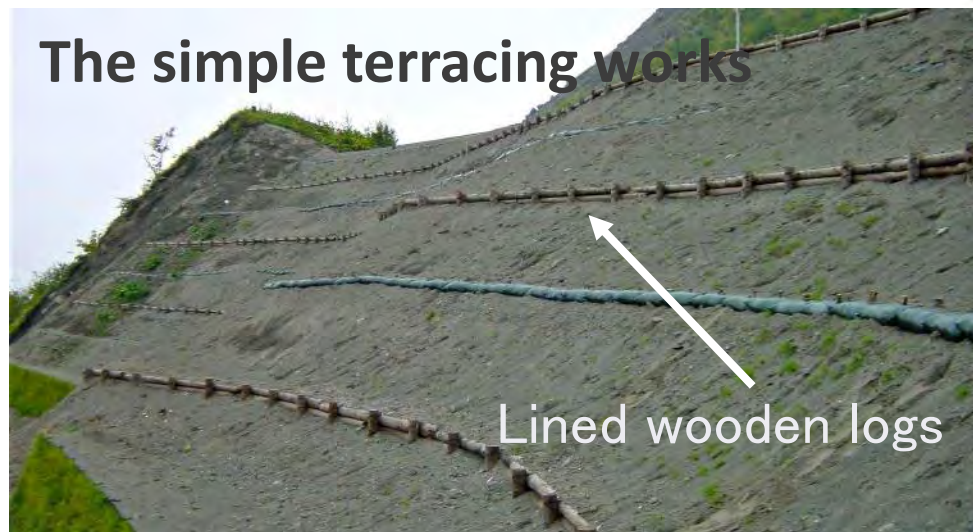
Ashio, Japan

Recovered in 2010

Well-managed forests provides us  
with multiple benefits

- Disaster Prevention
- Climate Change Mitigation
- Water Resources Conservation
- Timber Production
- Conservation of Biodiversity

The simple terracing works using wood logs prevent sheet erosion and make a good environment for trees to grow.



The Number of Sediment-Related Disasters in Japan Over the Past 40 Years

(Forestry Agency, 2023)

# SEDIMENT DISASTERS IN VIETNAM

- Landslides are frequent in degraded forests and abandoned cultivated lands on steep slopes.



Landslides caused by heavy rainfalls in northern Vietnam (Yen Bai province), photographed in September 2023.

# LAND USE ON SLOPES IN VIETNAM

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- “Chisan”, Japan’s forest management techniques have high technical potential, especially in the restoration of forests on devastated slopes.
- Due to economic difficulties, there is a strong tendency to use mountain slopes for agriculture.



Slopes Along the Roadsides in Vietnam

# CHALLENGES IN THE FUTURE

Japan's history with deforestation and landslides has led to **original forest management techniques** focused on disaster prevention and mitigation.

These techniques hold a great potential for significant **contributions to forest restoration** in developing countries.

Successful forest restoration also requires addressing **social and economic issues** in each developing country.

