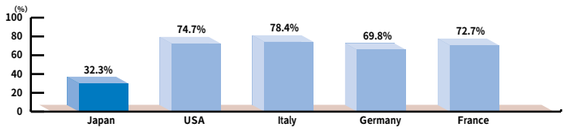
Natural and Social Conditions in Japan S usceptible to Sediment-related Disasters

Steep mountains, geological weakness and severe weather conditions

Japan is blessed with rich natural environment. Such environment, however, presents severe natural conditions. The mountainous and hilly areas make up 70% of the total land area of Japan. With a large number of rapids and its geological weakness, the Japanese islands are vulnerable to sediment-related disasters caused by weather conditions like typhoons and localized torrential rain.

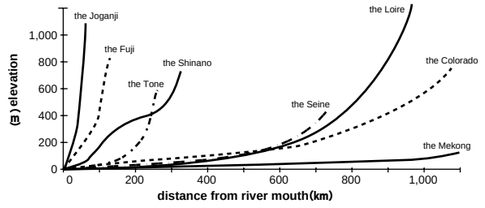
■ Smaller proportion of habitable area with respect to total land area of Japan.



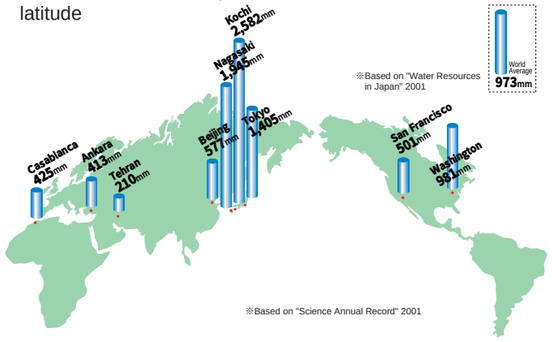
※The above information on the land area of Japan is based on the Papers by the Ministry of Public Management, Home Affairs, Posts and Telecommunications, Statistics Bureau of Japan.

※The land areas of foreign countries were calculated in the following formula: Habitable land area = Total land area - (Forest area + Lake area) The 'lake area' include natural lakes and other major lakes having an area over 5,000km2 (Based on "Science Annual Record" 2001).

■ Larger proportion of rapid rivers in Japan than in other countries in the worl



■ Annual Rainfall in major world cities at similar latitude



※Based on "Water Resources in Japan" 2001

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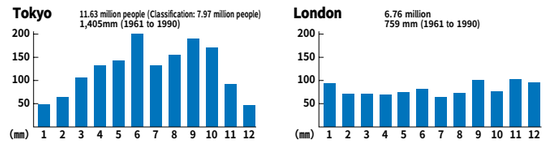
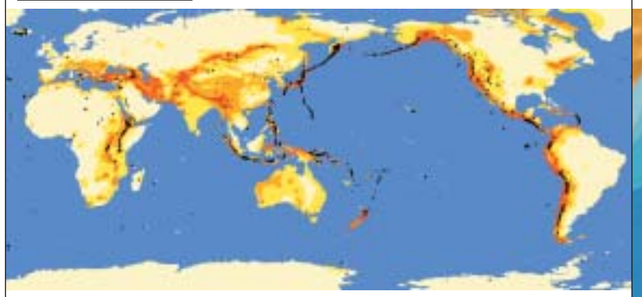
■Population and annual rainfall of cities in the world

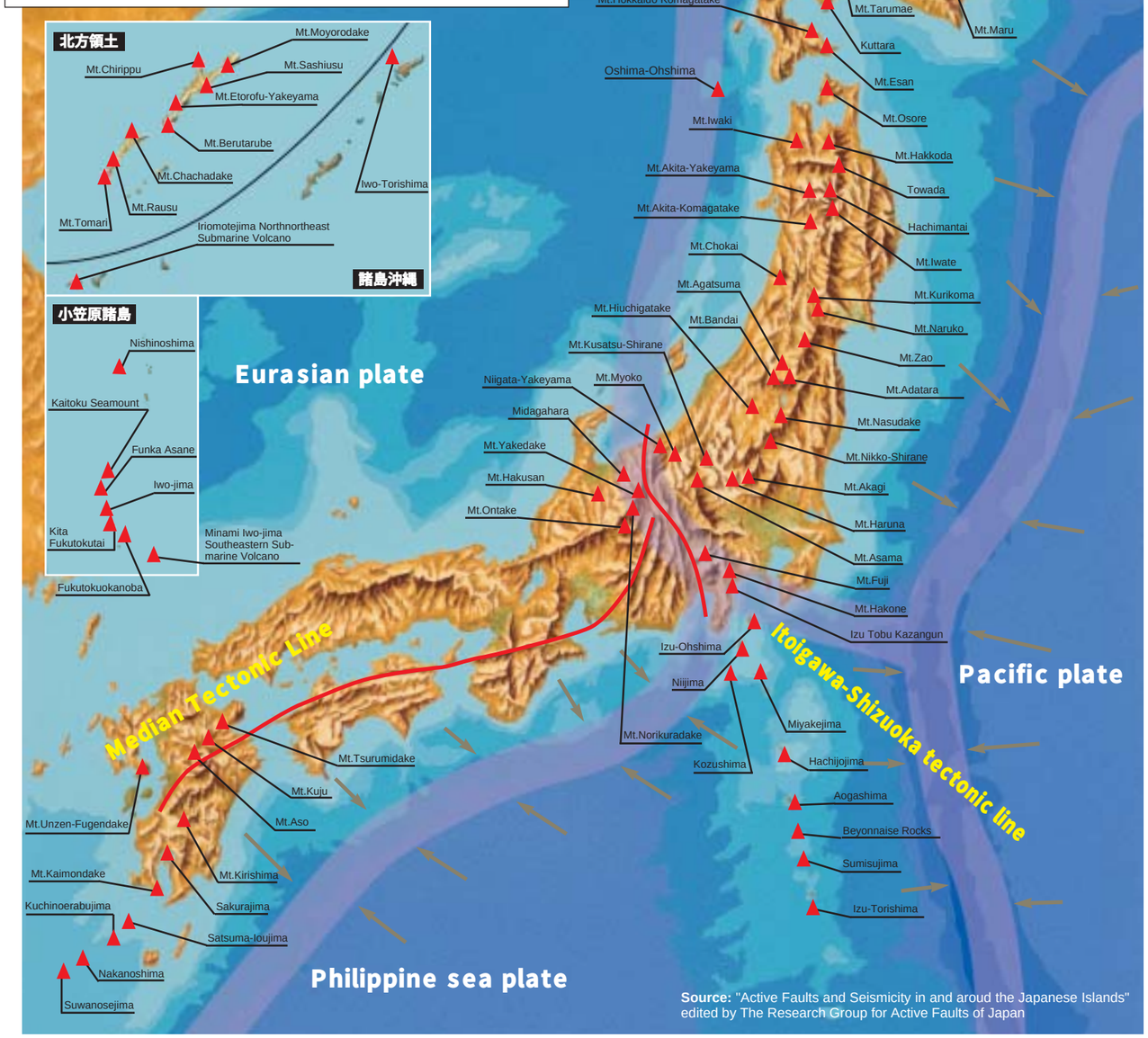


※Based on "Science Annual Record" 2001

volcanoes in the world



There are some 850 active volcanoes in the world.



Source: "Active Faults and Seismicity in and aroud the Japanese Islands" edited by The Research Group for Active Faults of Japan

The Japanese islands vulnerable to damages by earthquakes and volcanic eruptions

Located over the circum-Pacific volcanic zone, the Japanese islands are scattered with as many as 86 active volcanoes, accounting for about 10% of the total active volcanoes in the world. Japan is also situated over one of the world-largest mobile belts where major four plates meet: Pacific Plate, Eurasian Plate, Philippine Sea Plate, and North American Plate. For this reason, Japan is frequented with earthquakes and volcanic eruptions.

Urbanization on one hand but depopulation and aging on the other hand

In urban areas, an increasing number of areas have become more vulnerable to a sediment-related disaster because of residential area developments on the foothill and hillside. On the other hand, the local depopulation in mountain areas leads to inadequate forest management, thereby resulting in mountain devastation. In these areas, there are increasing risks of sediment-related disasters. On top of this, with the progress of the aging society, more and more people have become vulnerable to a disaster because they have difficulty in taking quick actions for evacuation in case of emergency.

An urban district of Kobe where a residential area infringes on a mountain area.