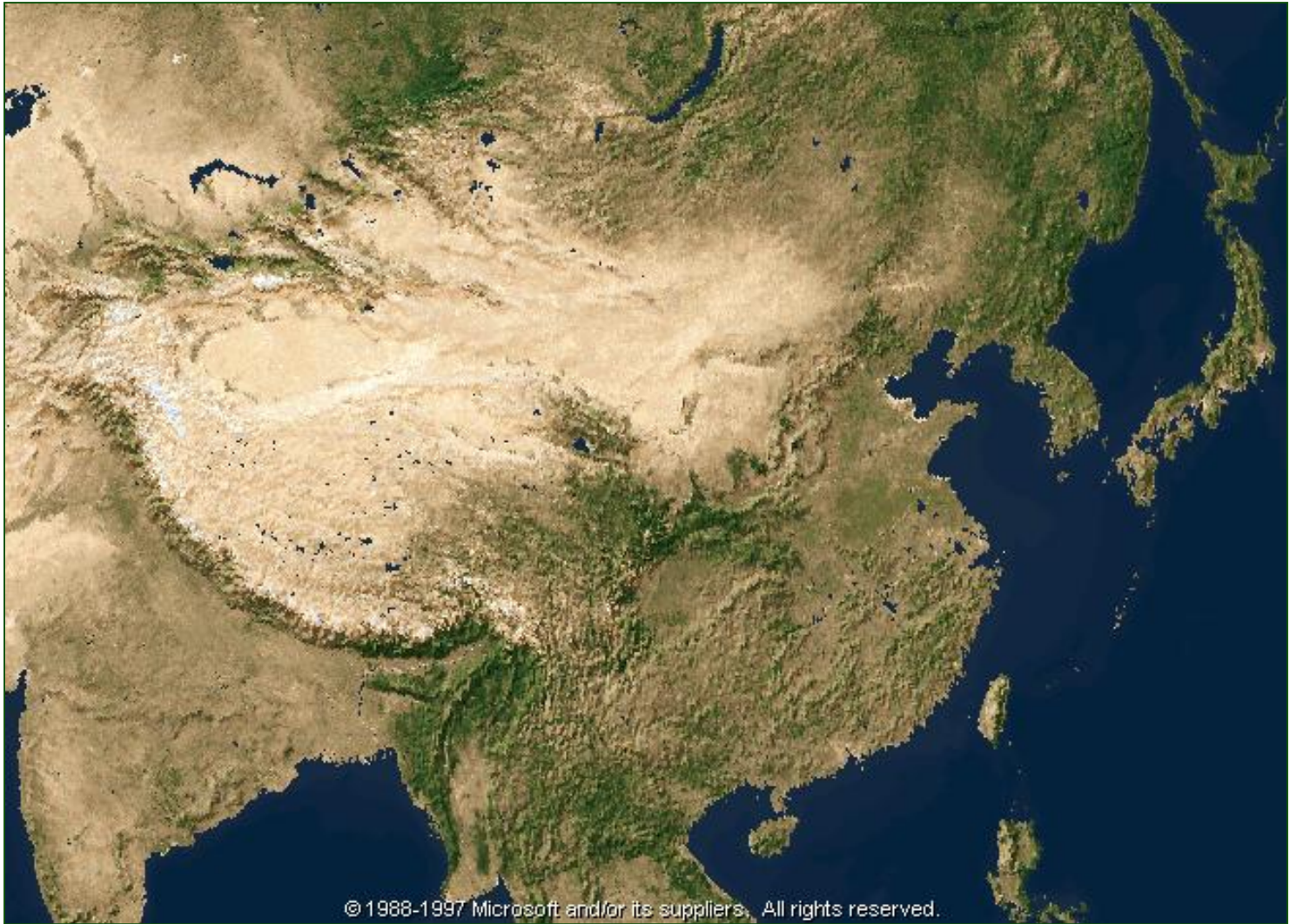


Physical Geography of East Asia



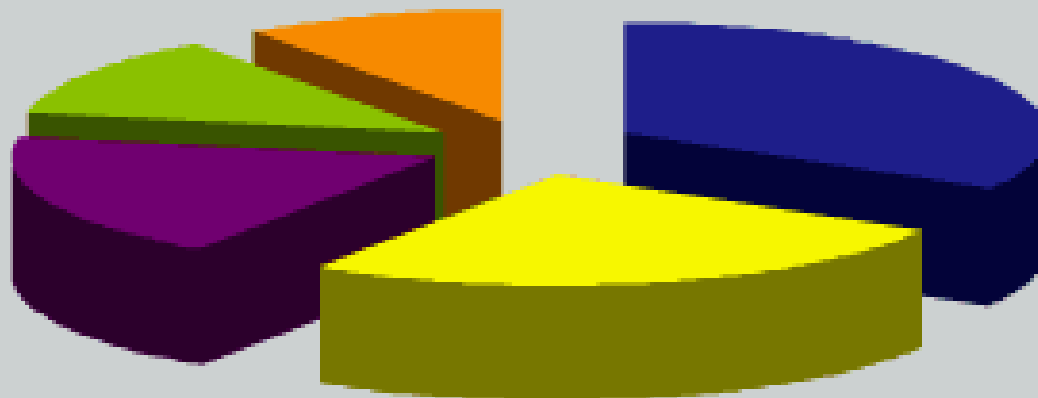
Satellite View of China



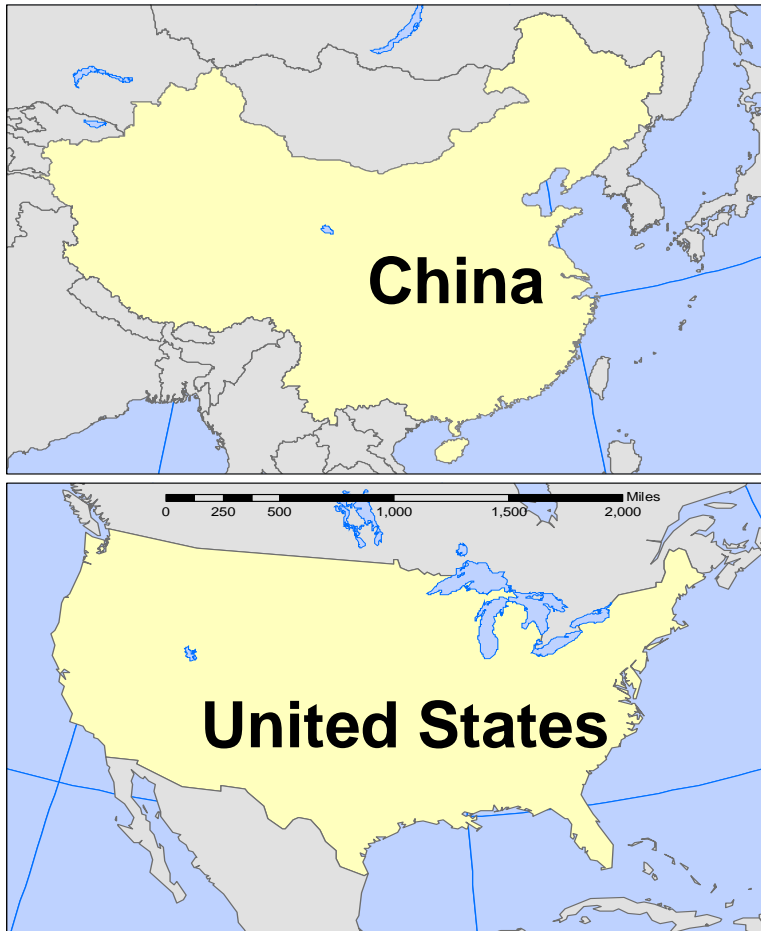
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Landforms of China

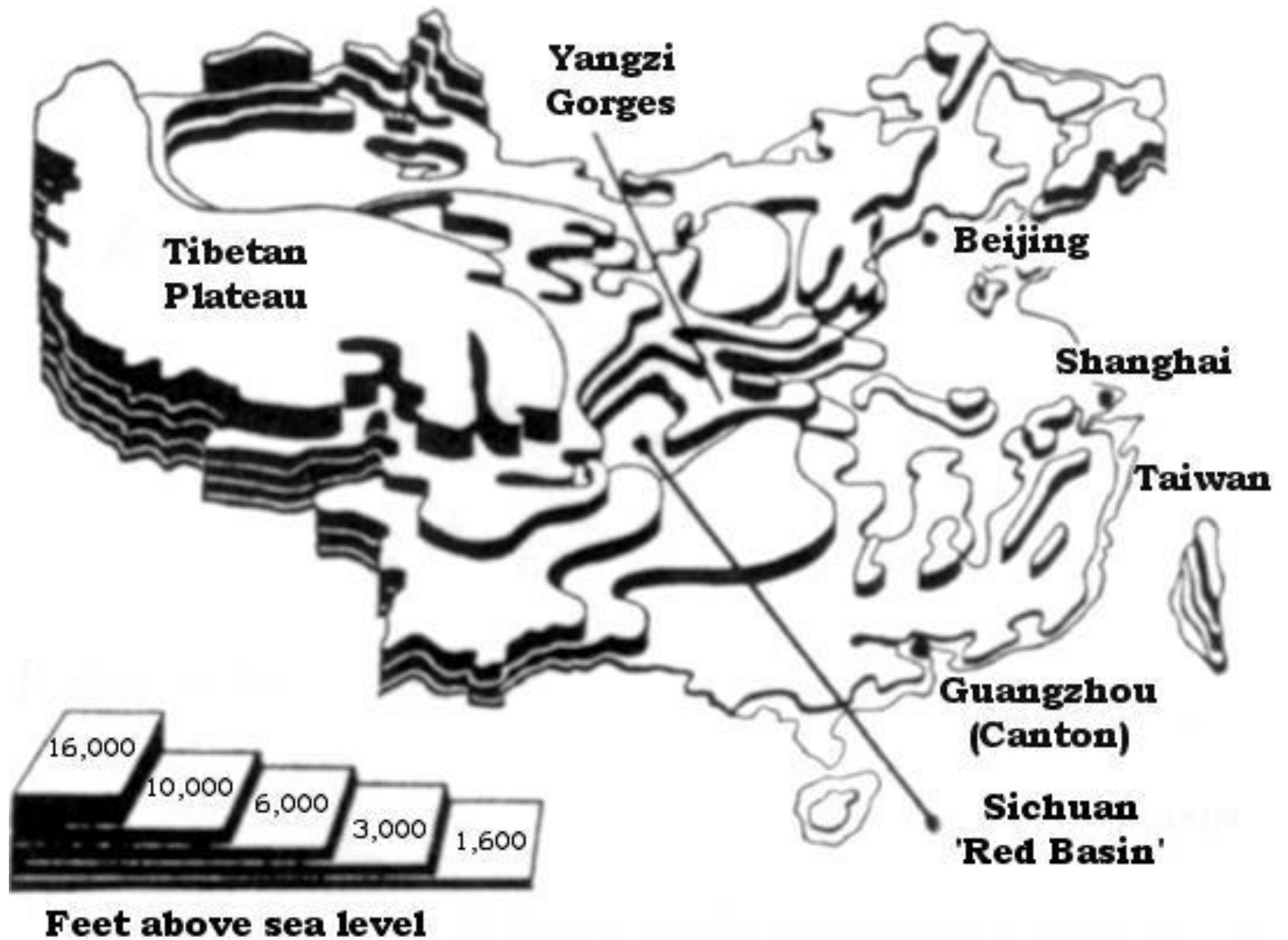
	Area	Percentage in total area
Land area (million sq. km)	9.60	100
By landform (million sq. km)		
■ Mountains	3.20	33.33
■ Plateaus	2.50	26.04
■ Basins	1.80	18.75
■ Plains	1.15	11.98
■ Hills	0.95	9.9



China's Geography

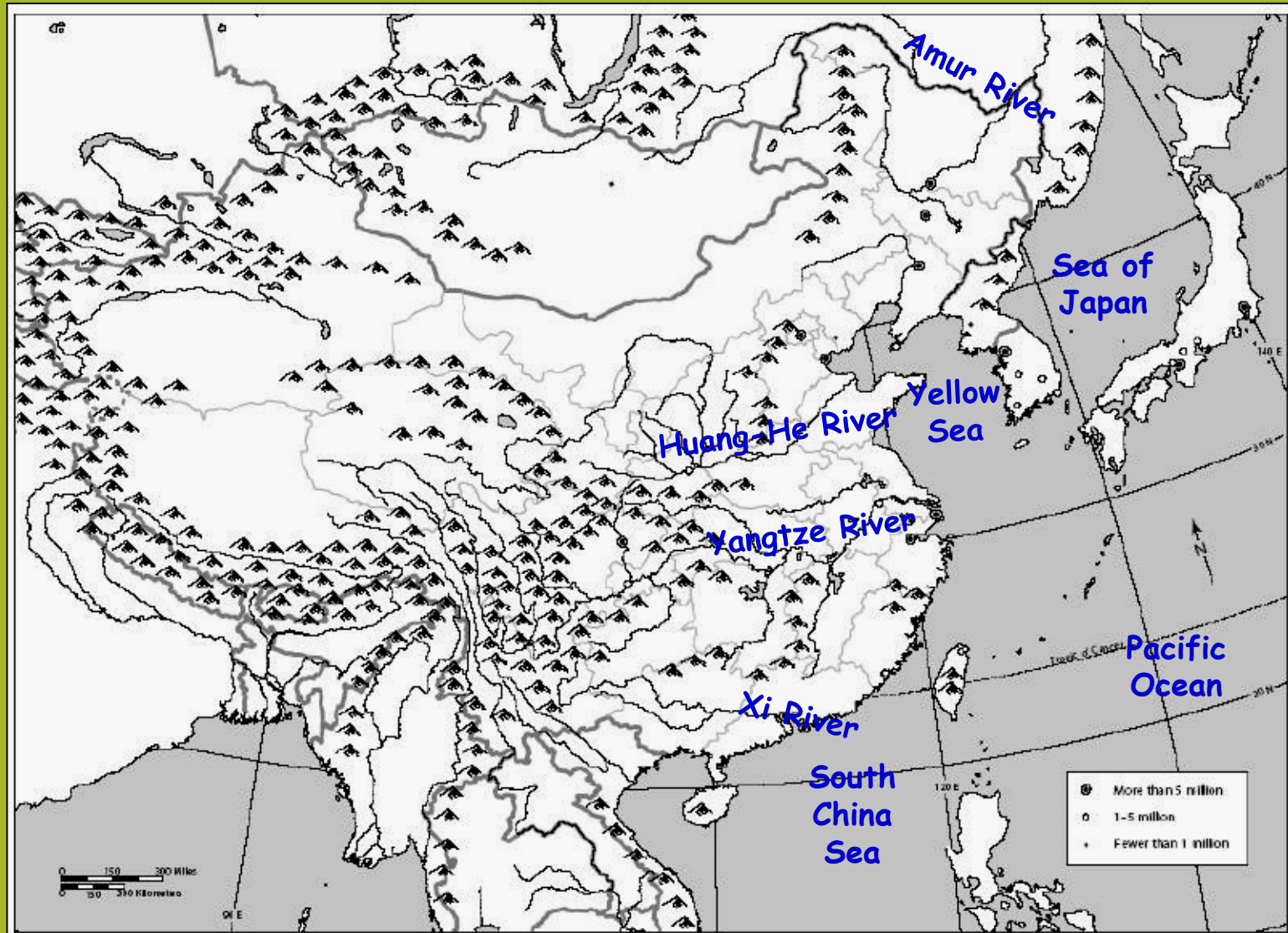


- 3rd largest country in the world.
- Comparable to the US in size
- 65% of the country is mountainous.
- Arable land represents 12% of the national territory as opposed to 25% for the United States.
- Per capita (0.086 hectare) is well below the world average.





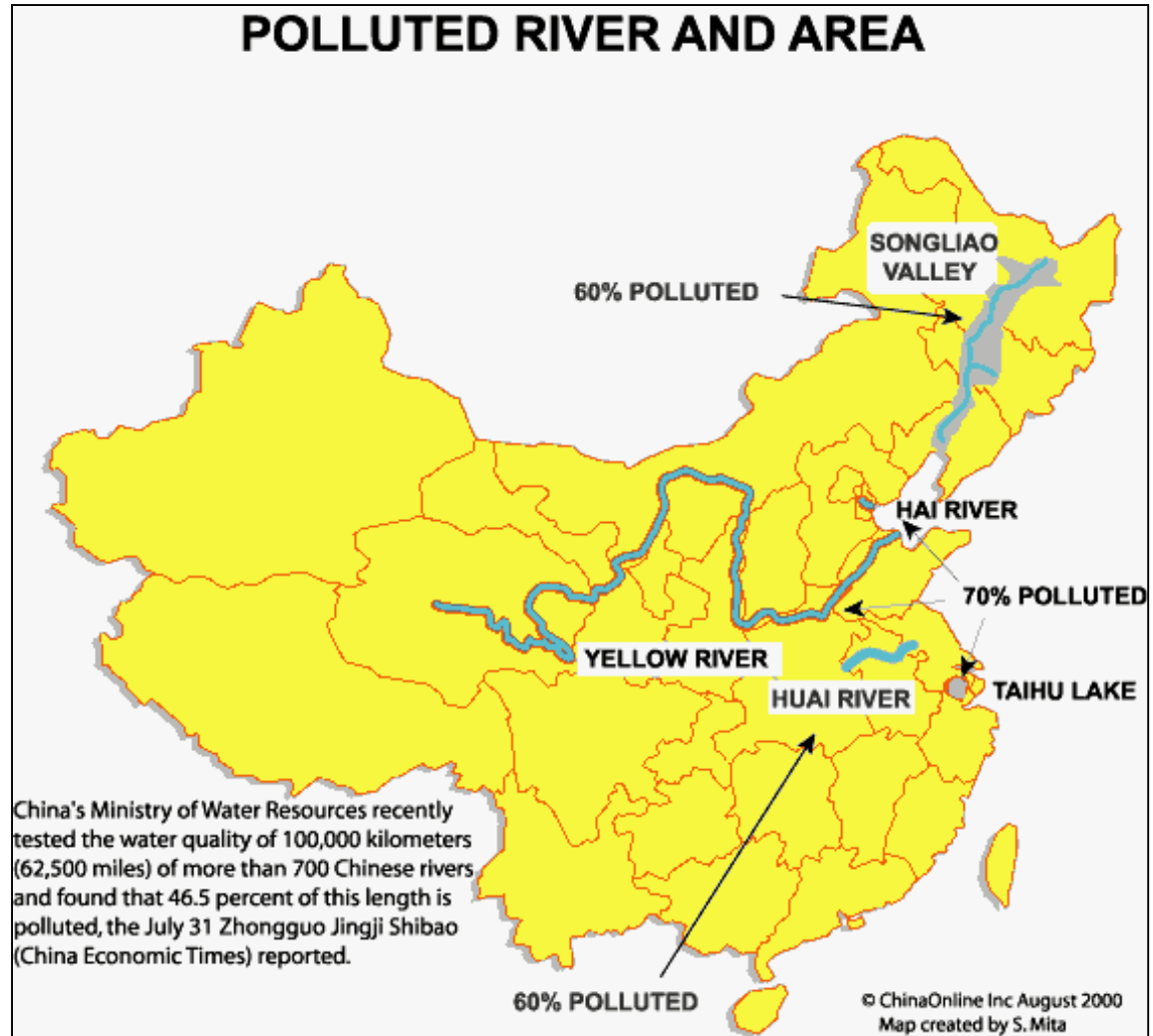
Bodies of Water



The Yellow River

Huang He
(Yellow River).

- Floods frequently.
- Extremely polluted
- Industrialization along the river



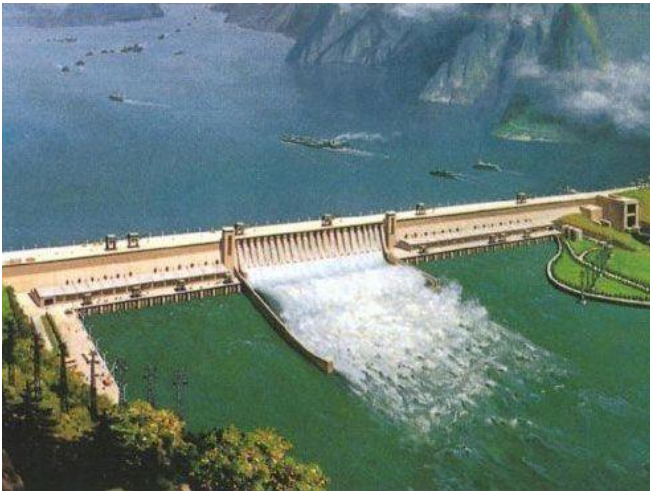
The Yangtze River

- Longest river in China
 - 3rd longest in the world
- Main river for southern China
 - 1/3 of China's population
- Empties out to China Sea at Shanghai
- Main river for rice agriculture

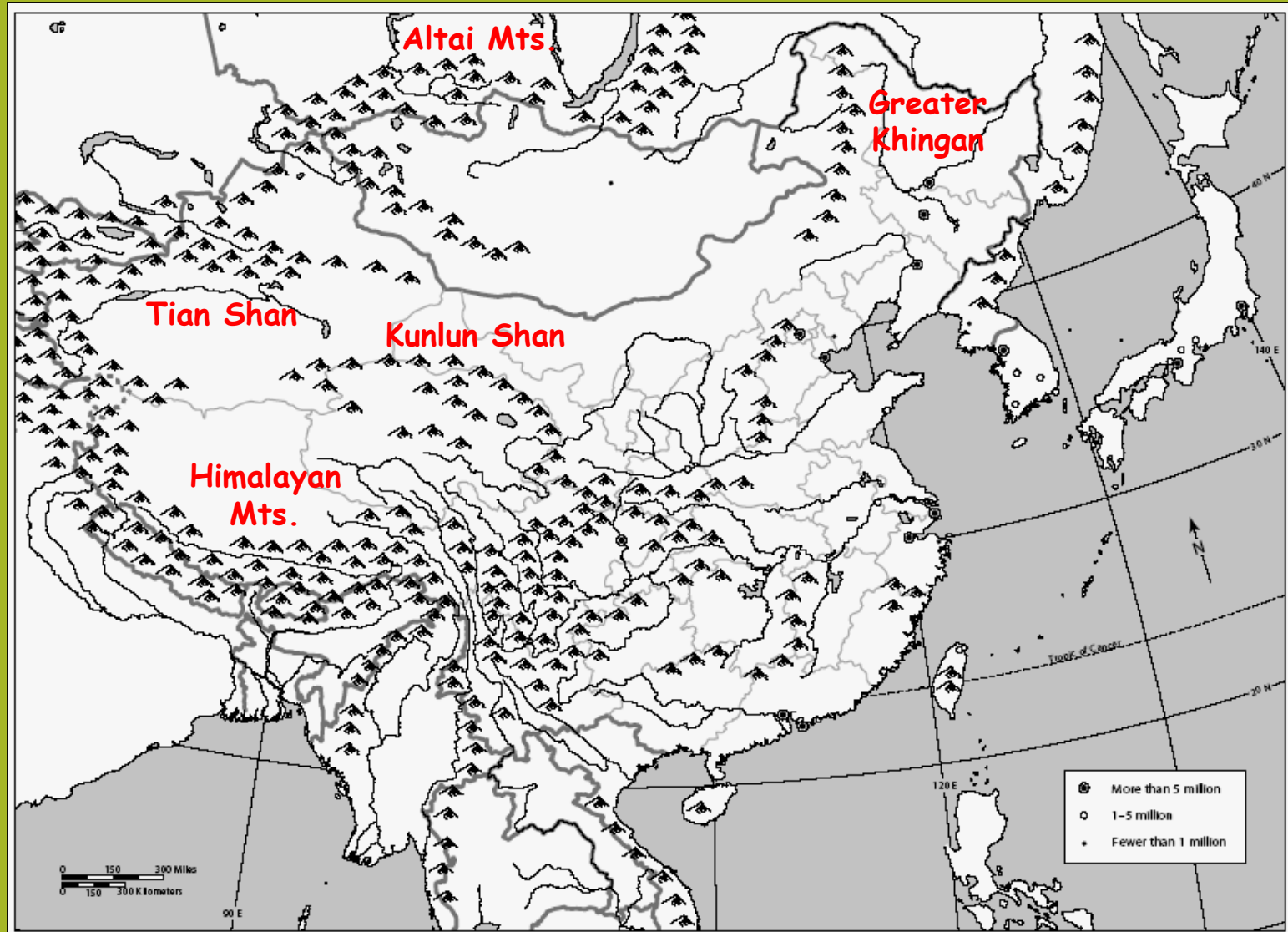


Three Gorges Dam

- Along Yangtze River
- One of the largest hydroelectric dams in the world
- Reservoir flooded hundreds of villages and displaced millions



Mountain Ranges

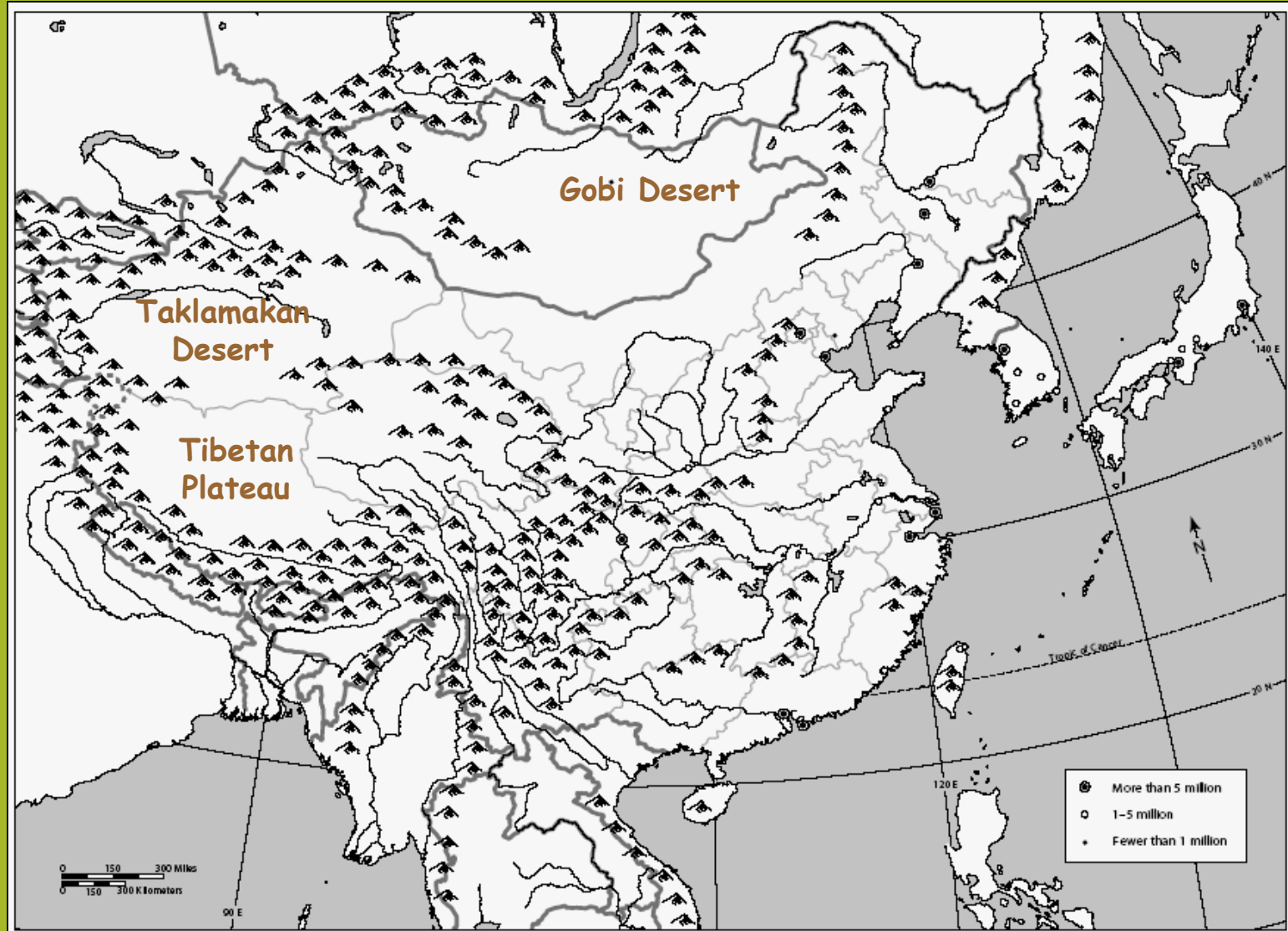


Kunlun Mountains

- Located in the west
- Where two of China's great rivers begin (Yellow and Yangtze)



Deserts & Plateaus



- **Mongolian Plateau**

- Nomadic herders

- **Tibetan Plateau**

- Averages more than 3,000 feet above sea level

- **Gobi Desert**

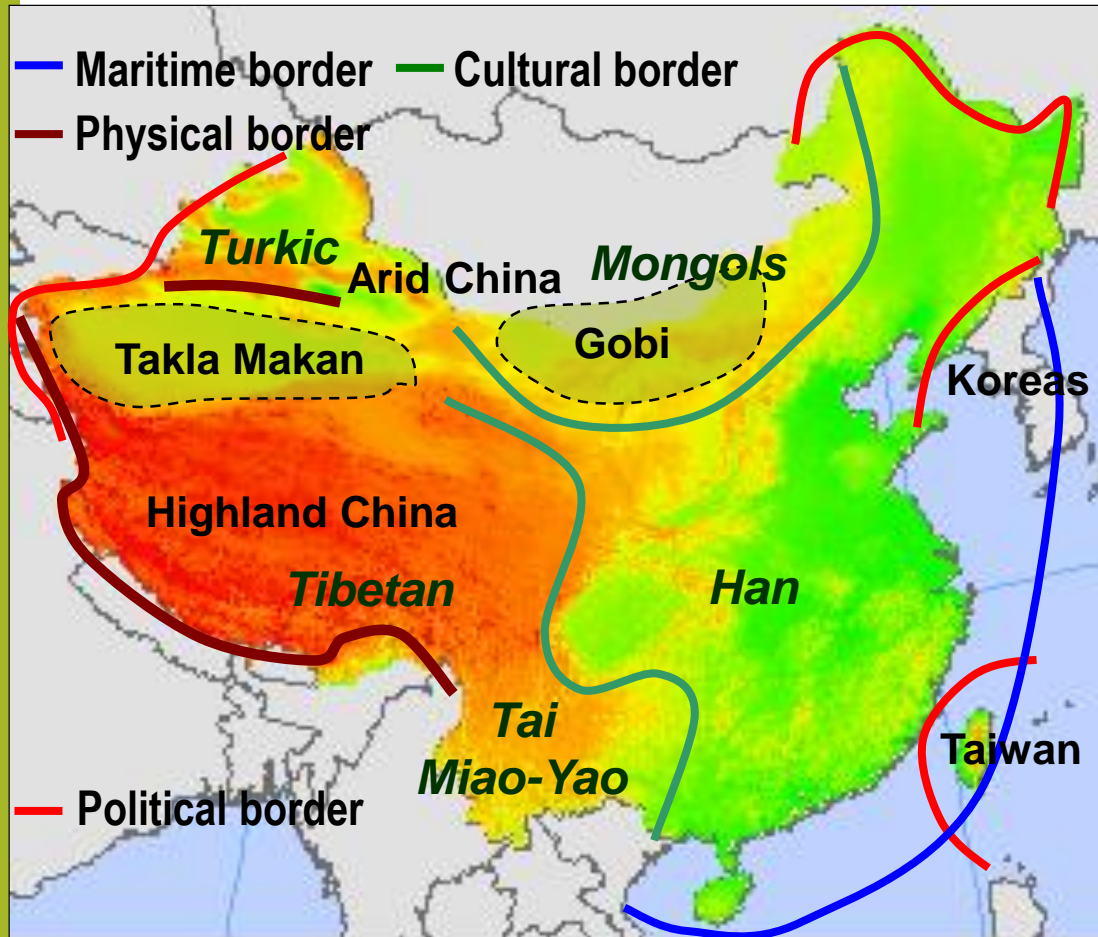
- Stretches more than 500,000 miles, mainly in Northern China and Mongolia

- All three are scarcely populated because of severe climates and topography

- All experience extreme cold



China



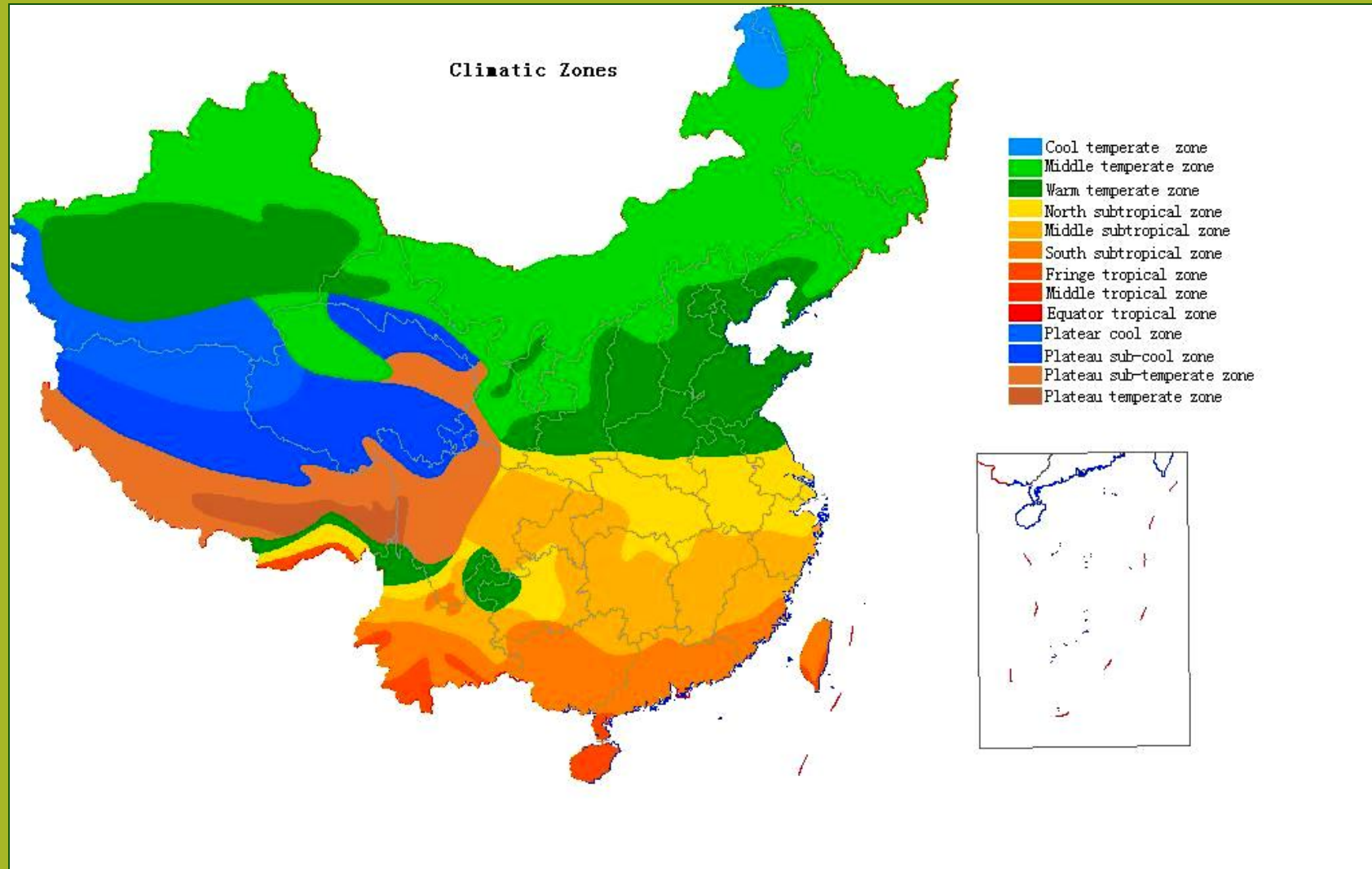
Chinese Borders

- East: sea border.
- West: Deserts and mountains.
- North: Deserts.
- South: Himalayas.

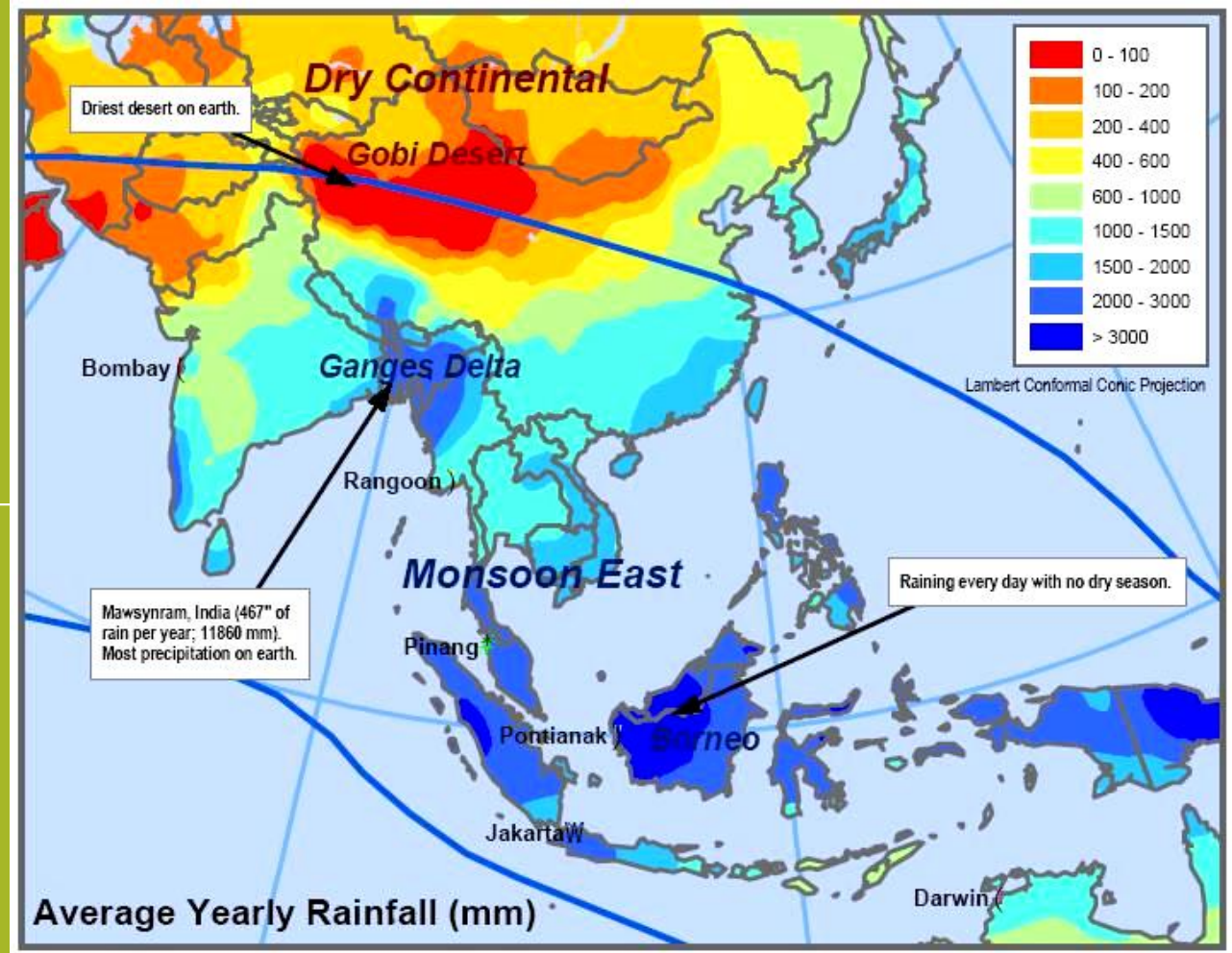
- Cultural division between the Han realm and the China of the minorities.

Climate

China's Climate Zones



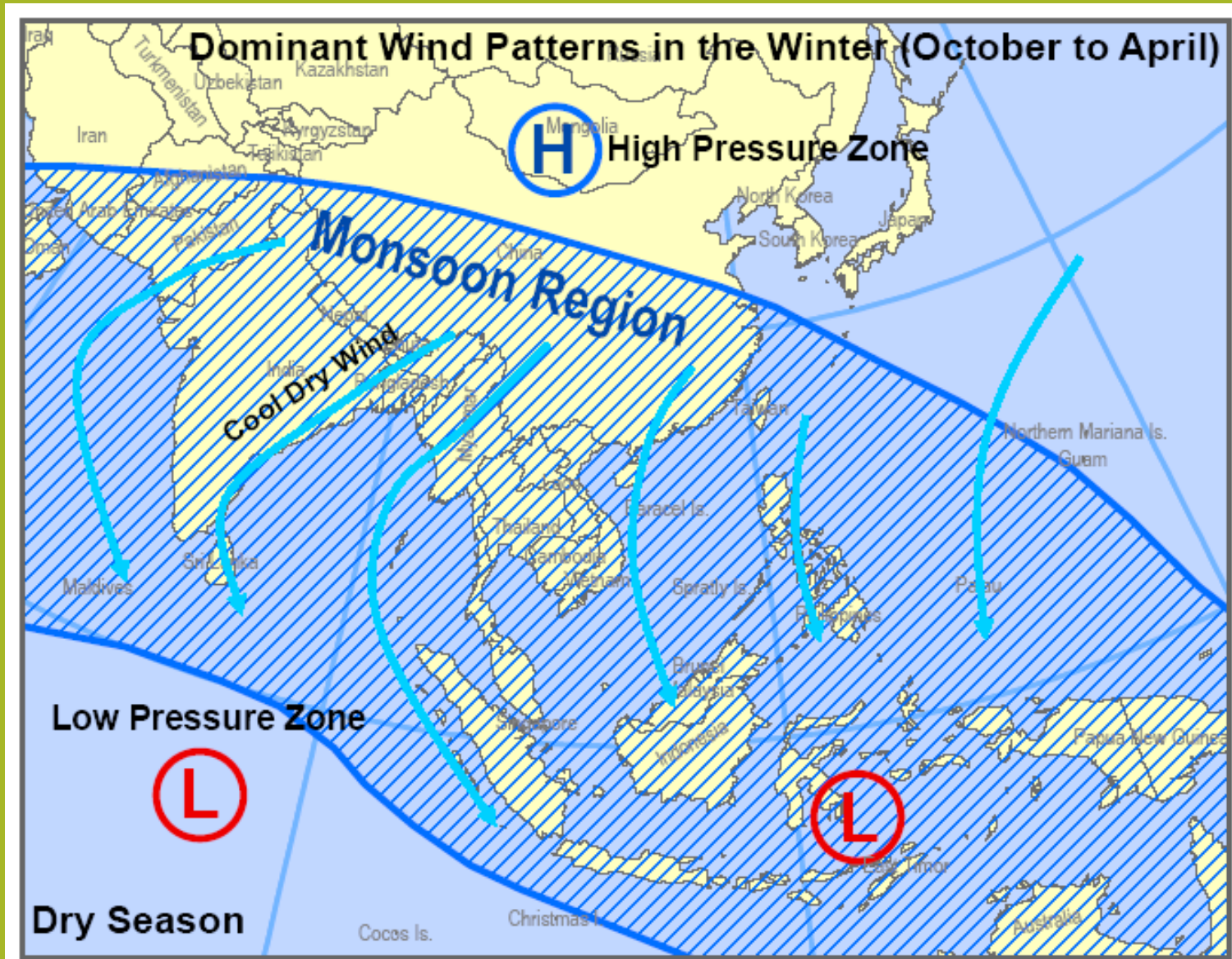
Monsoon Precipitation Patterns



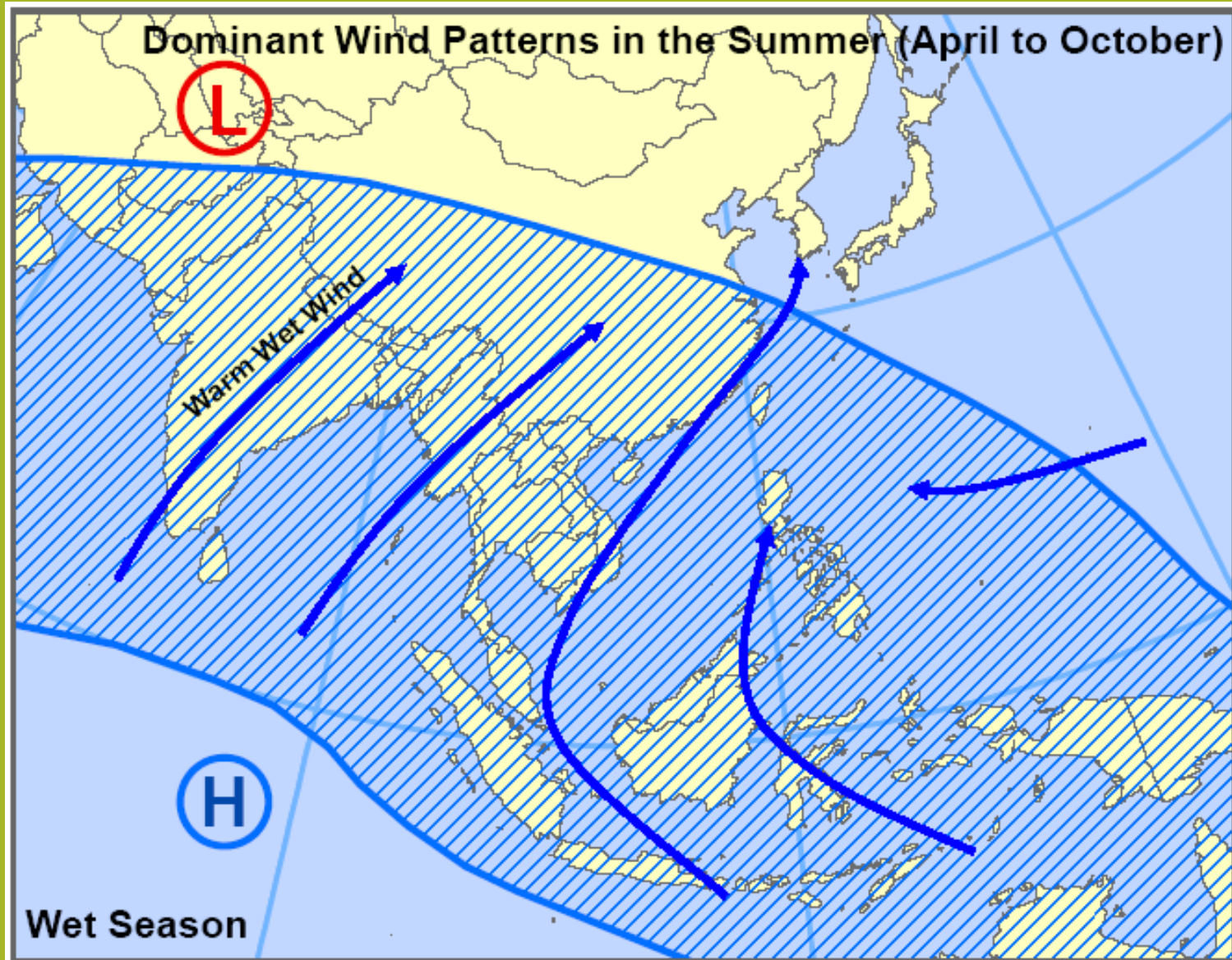
This region also benefits/suffers from the rainfall from monsoons

Sometimes receive **typhoons** = tropical storms

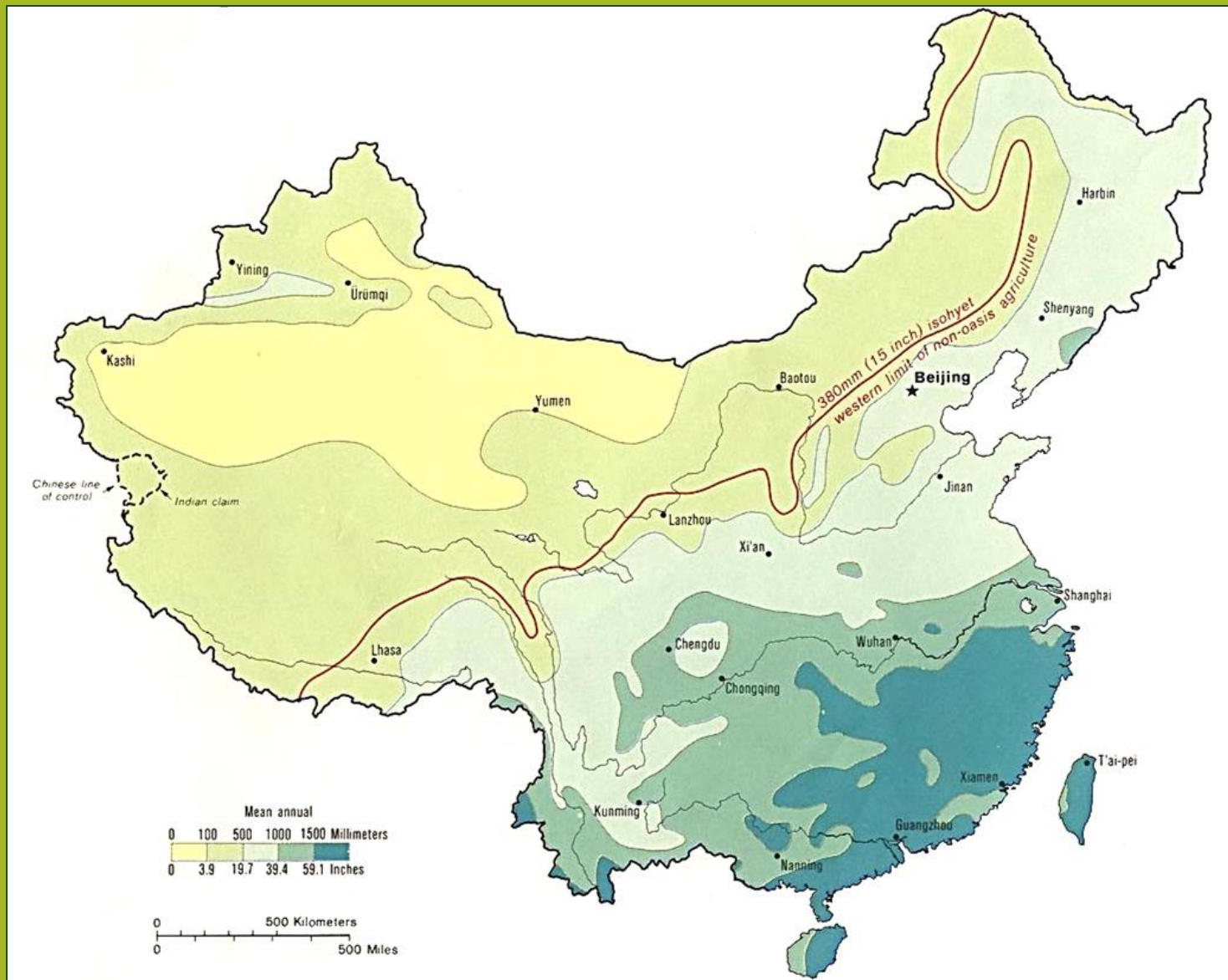
Winter Monsoons



Summer Monsoons



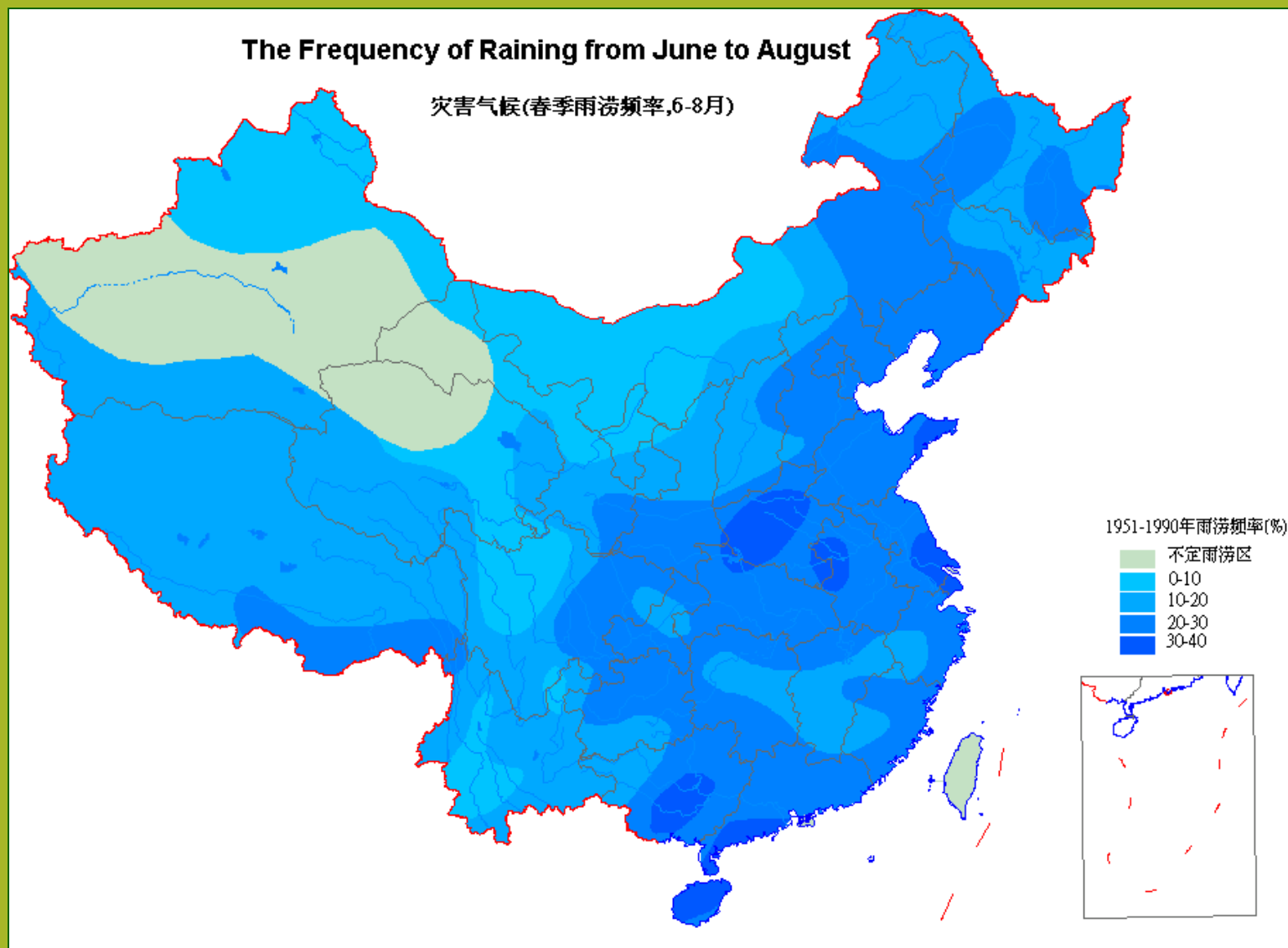
Precipitation in China



Summer Rainfall

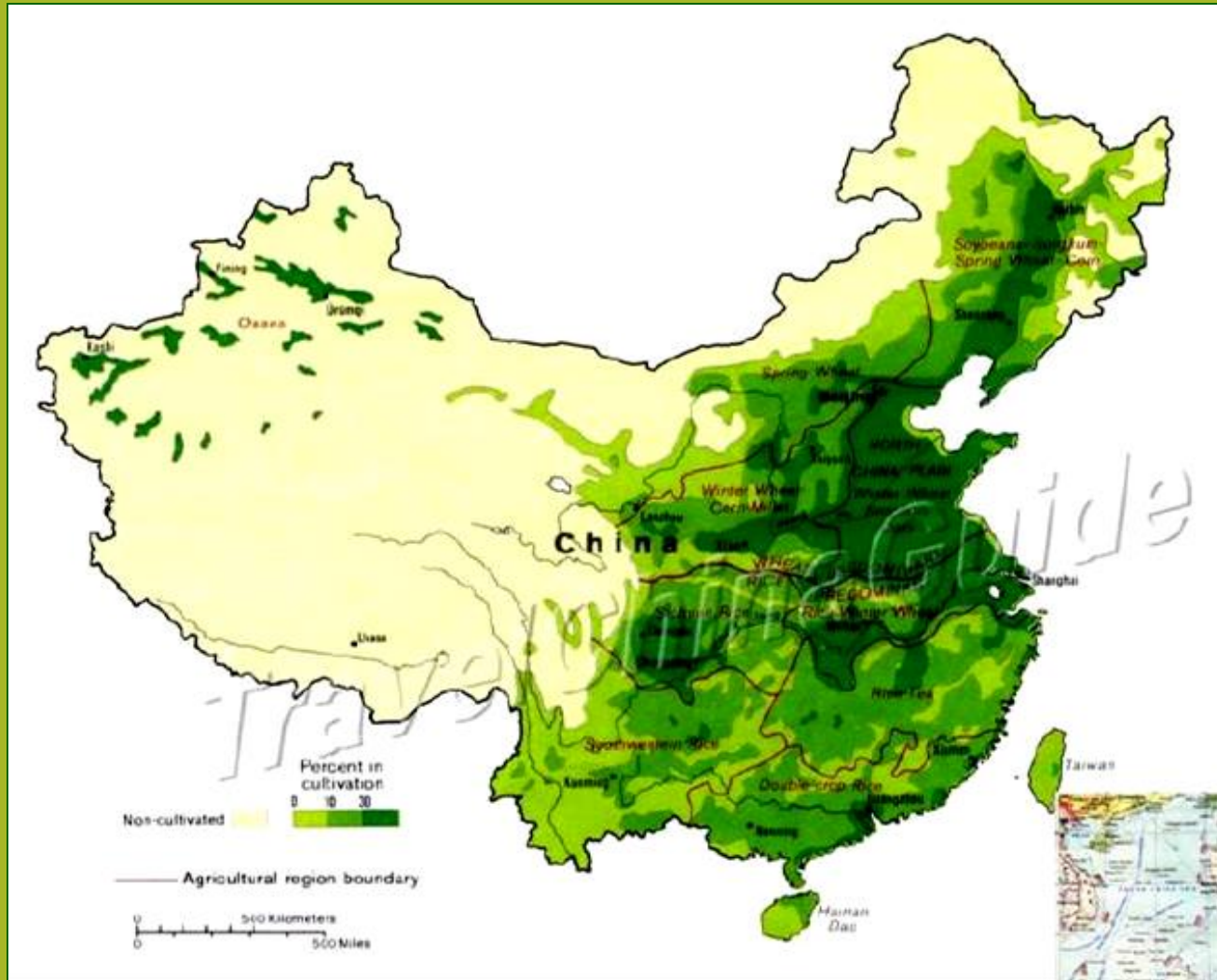
The Frequency of Raining from June to August

灾害气候(春季雨涝频率,6-8月)

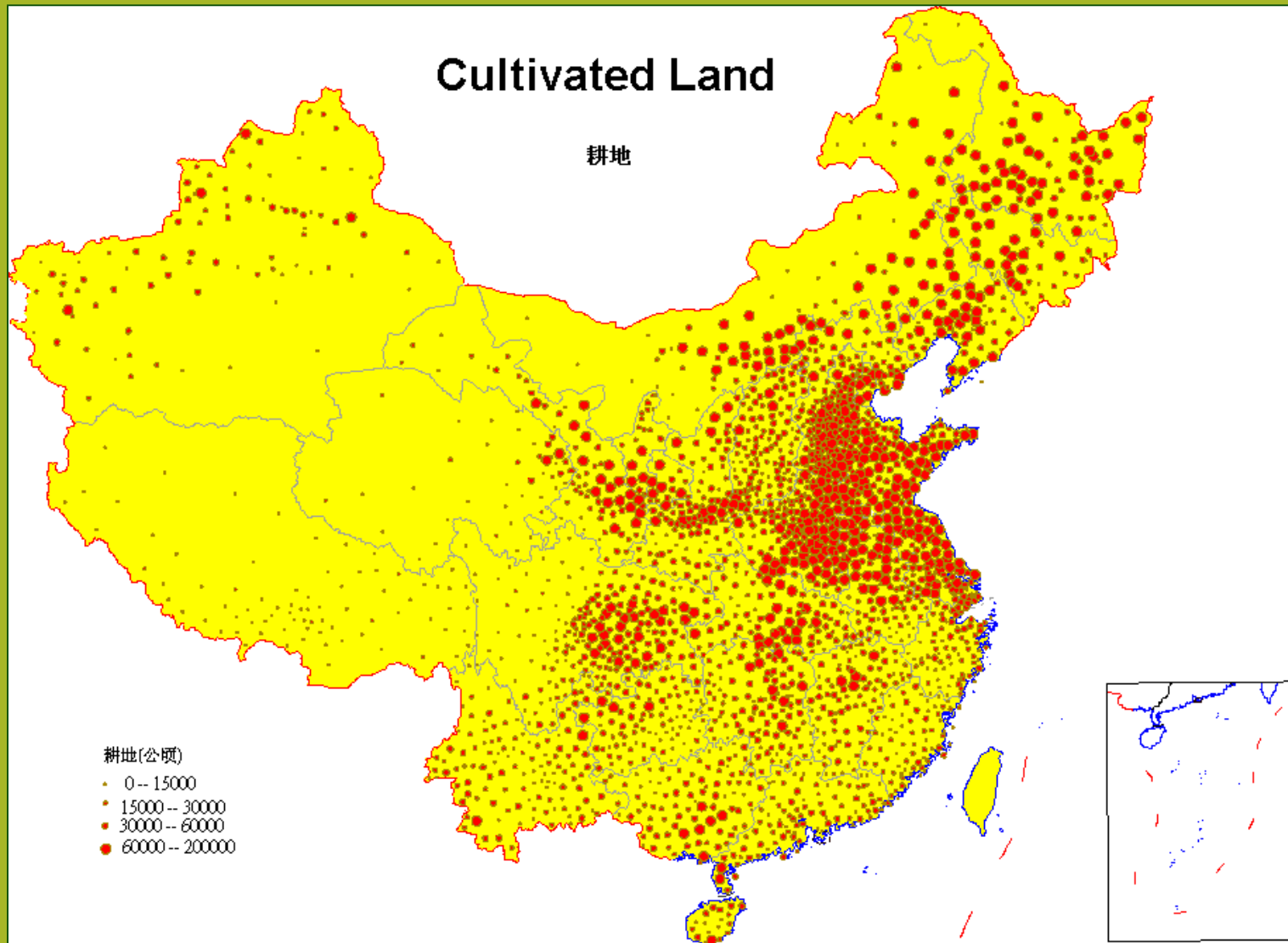


Vegetation

Agricultural Regions in China



Arable Land



Natural Resources

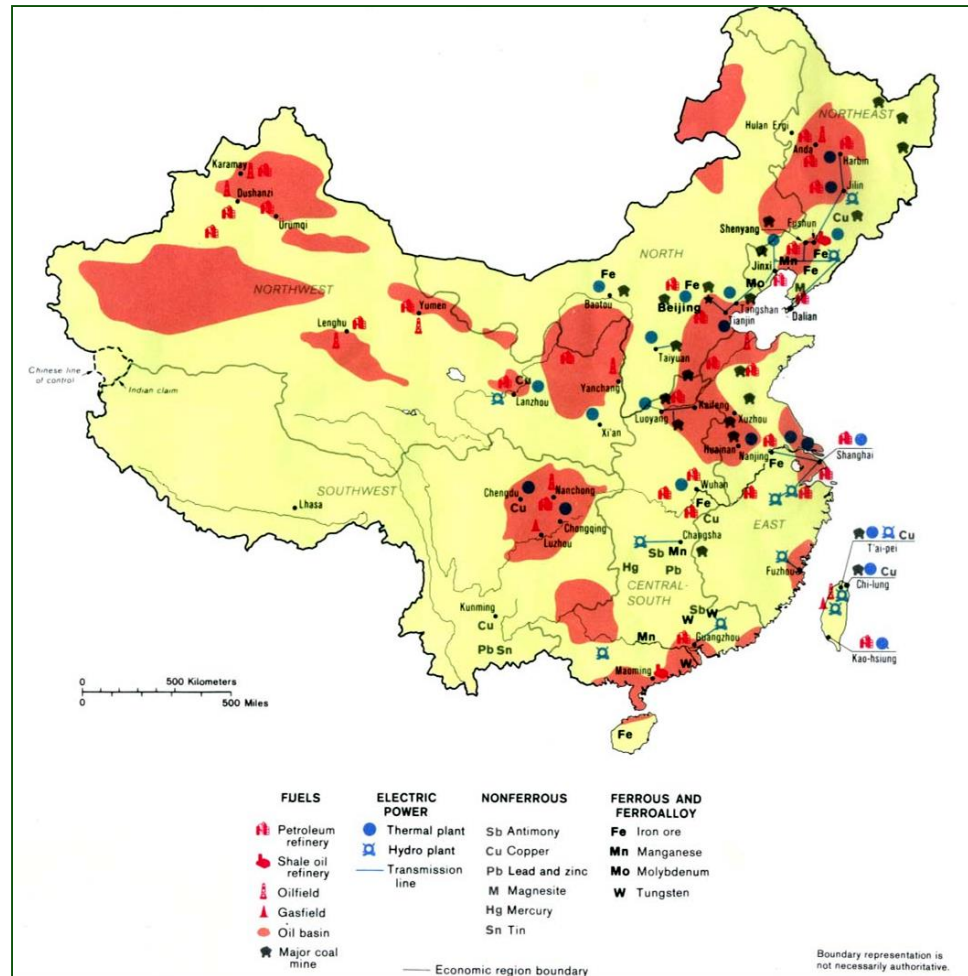
Major Chinese Industries

- Major Industrial Areas near Beijing and Shanghai



Fuels, Power, Minerals, & Metals in China

- Large reserves of petroleum, coal, and natural gas.
- Mineral resources include iron, lead, zinc, copper, etc.
- Allowed them to be self-sufficient for much of its history



Environmental issues



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Suffering from:

1. Deforestation
2. Desertification
3. Soil erosion
4. Coastal pollution
5. Flooding
6. Poor urban air quality

What kind of landform is Korea?

Divided between North and South Korea along 38 parallel



Korea



- “The shrimp between the whales”
- About the size of Indiana.
- Highly homogenous ethnically and linguistically
- Religiously divided between Christianity (49%) and Buddhism (47%).
- 75% urban with 27% of the population living in Seoul (13 million).

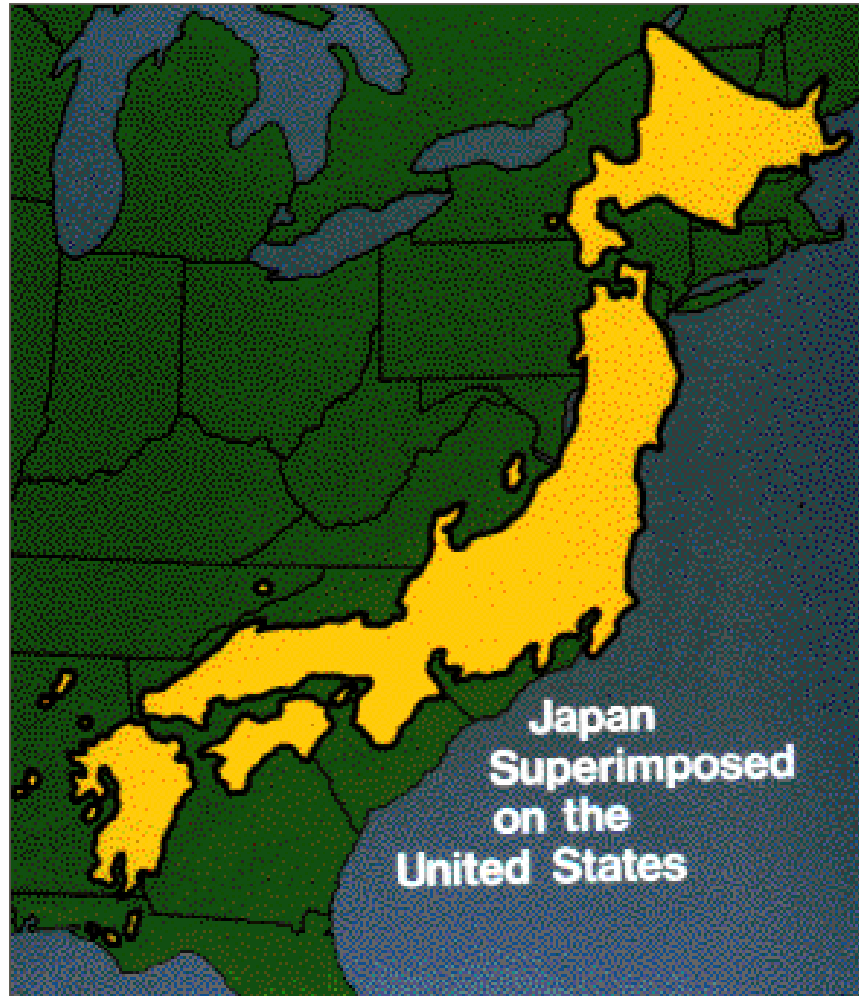
Population Distribution Activity

- Australia: 2 people per 15 desks
- USA: 14 people per 15 desks
- Japan: 14 people per 2 desks

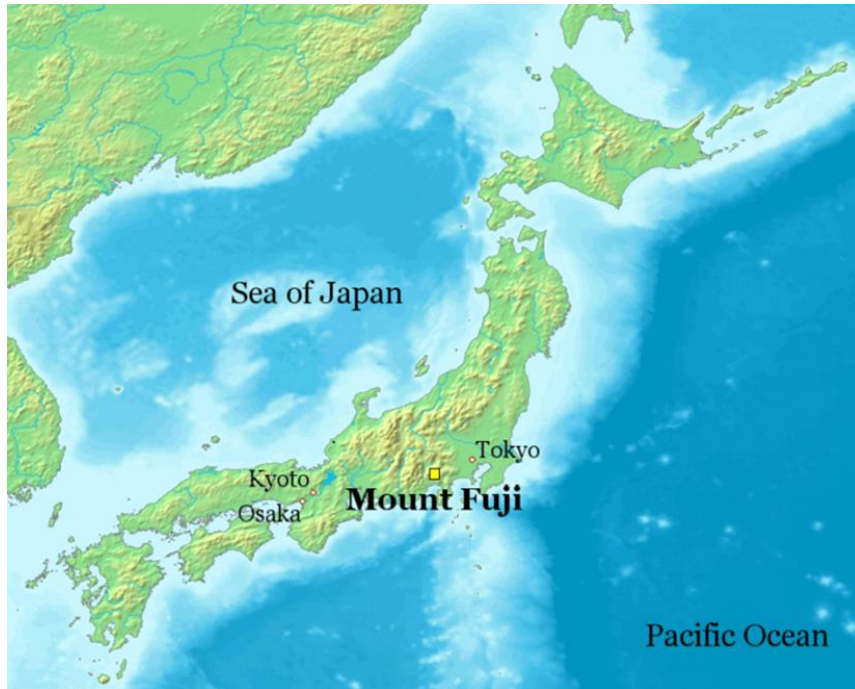
Japan's Geographic Challenge

- <https://www.youtube.com/watch?v=BhSeQxdJw1w&list=PLD985DC24042D71ED&index=18>

Japan and the United States

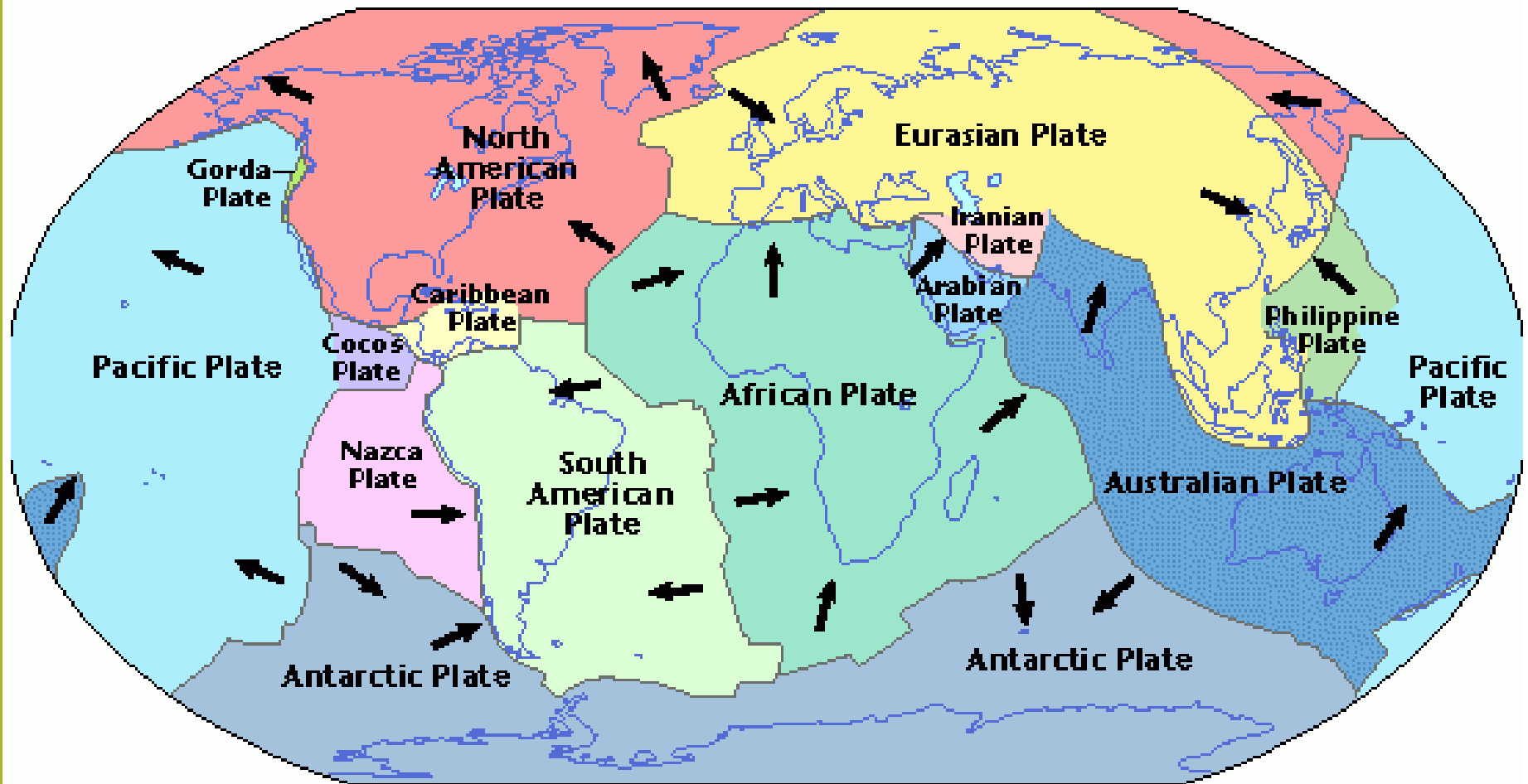


Japan: Physical Geography



- The homeland of Japan consists of four main islands: Hokkaido, Honshu, Shikoku, and Kyushu, and several hundred smaller islands.
- Mainly mountains separated by narrow valleys.
- Part of the Pacific “Ring of Fire.”
 - There are about 60 volcanoes in Japan
- Japan is subject to frequent and powerful earthquakes.

Plate Tectonics



The Forces That Cause Plate Tectonics

Image source: <http://pubs.usgs.gov/publications/text/dynamic.html>

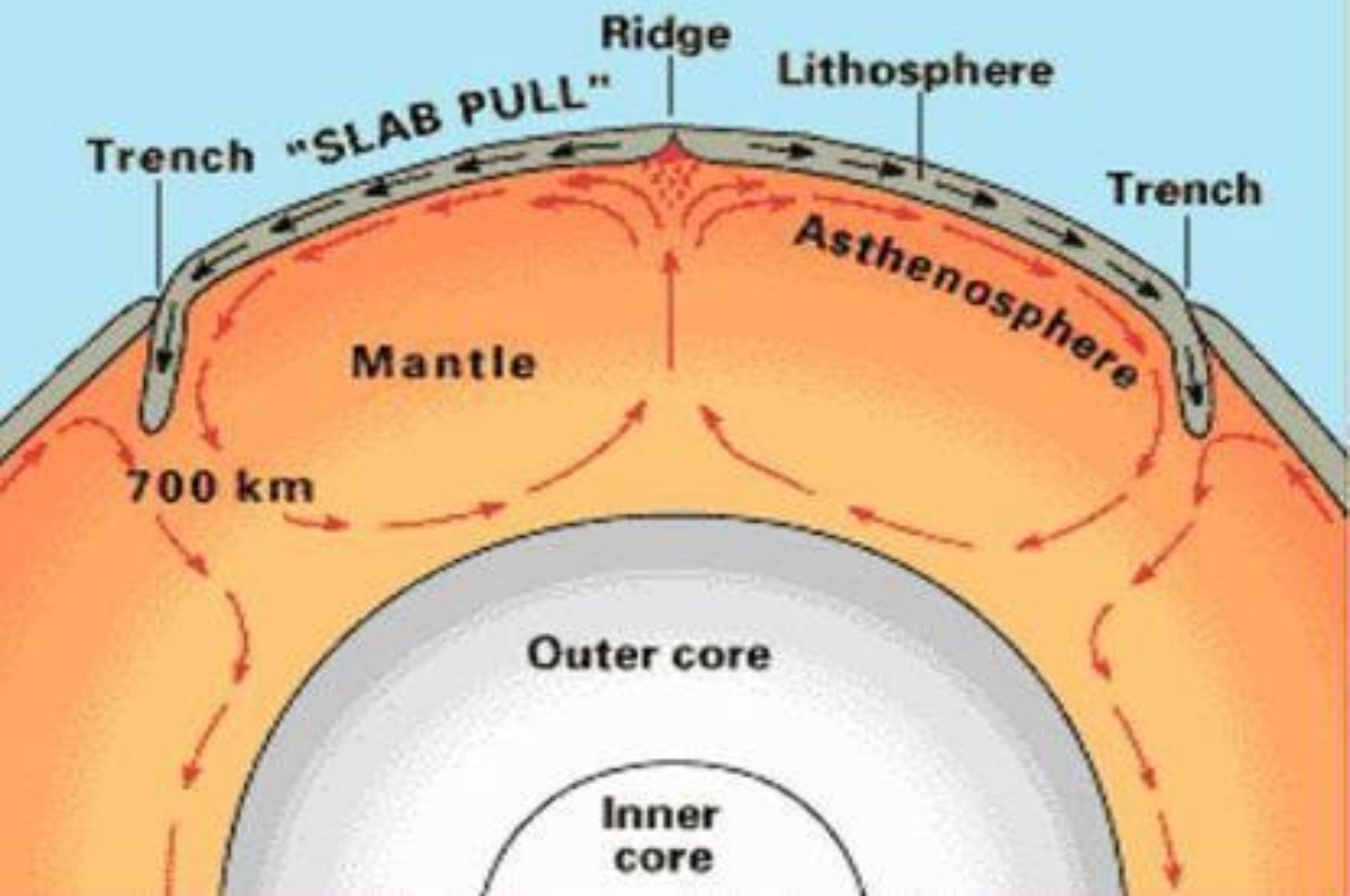
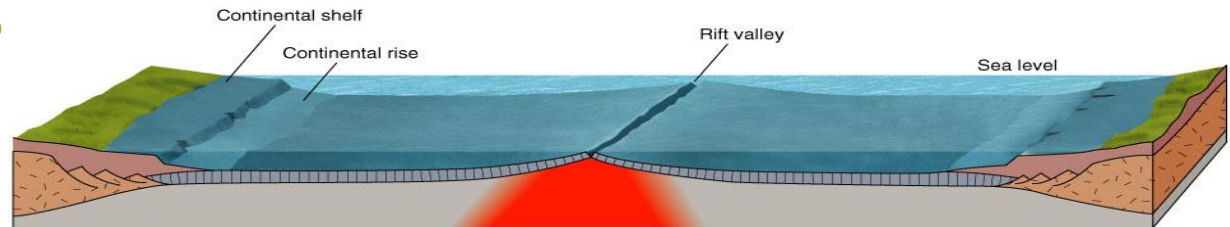
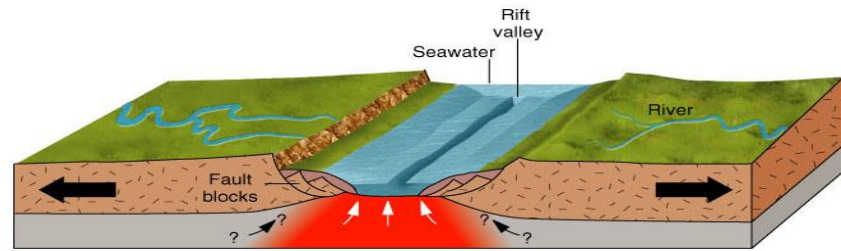
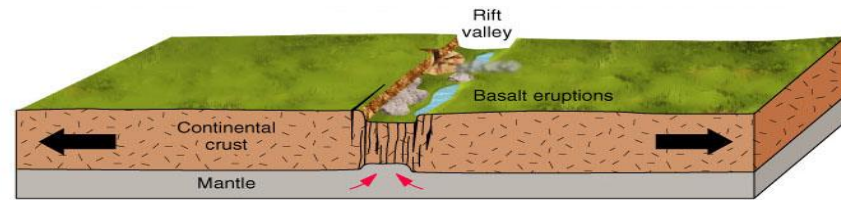
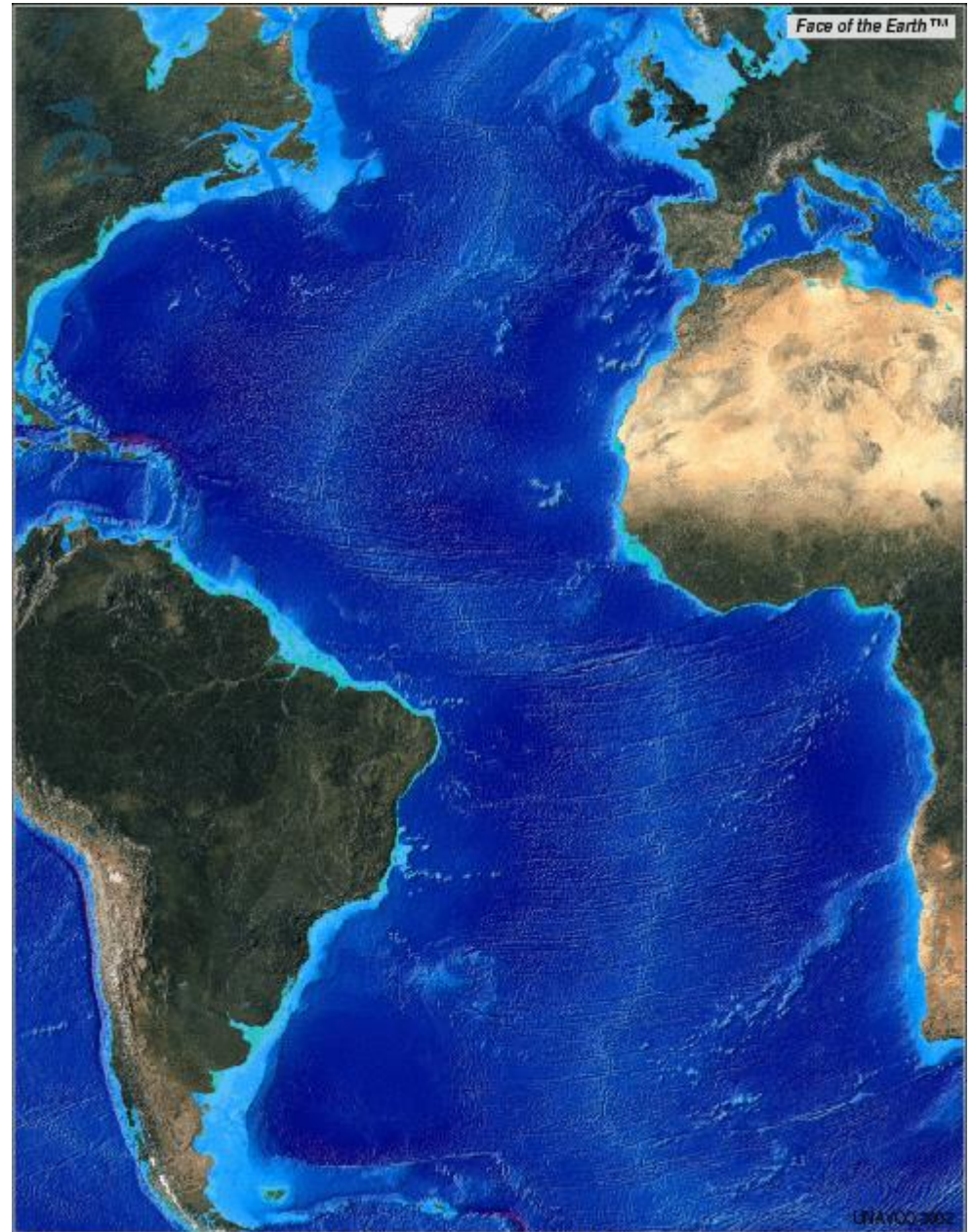


Plate Movements

- Divergent Boundary:
Plates spread away from each other. Creates a rift where magma from the core spreads up
- Divergent = Divide



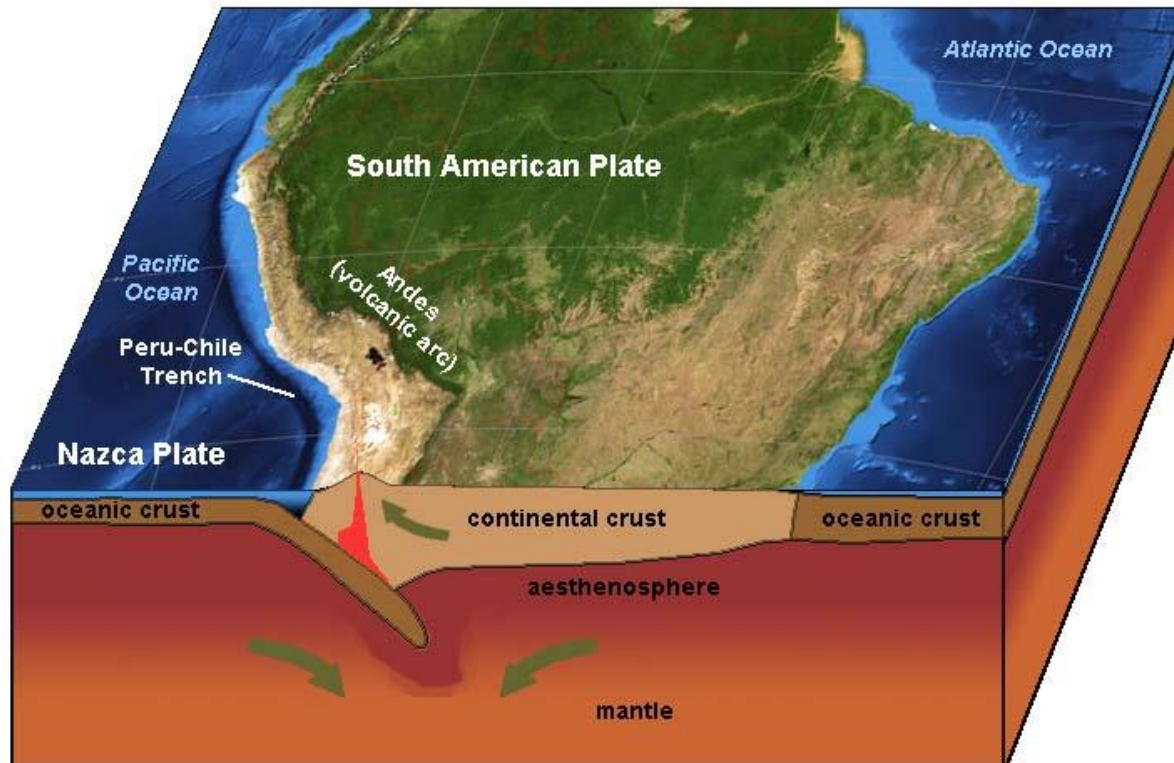
Divergent Boundary





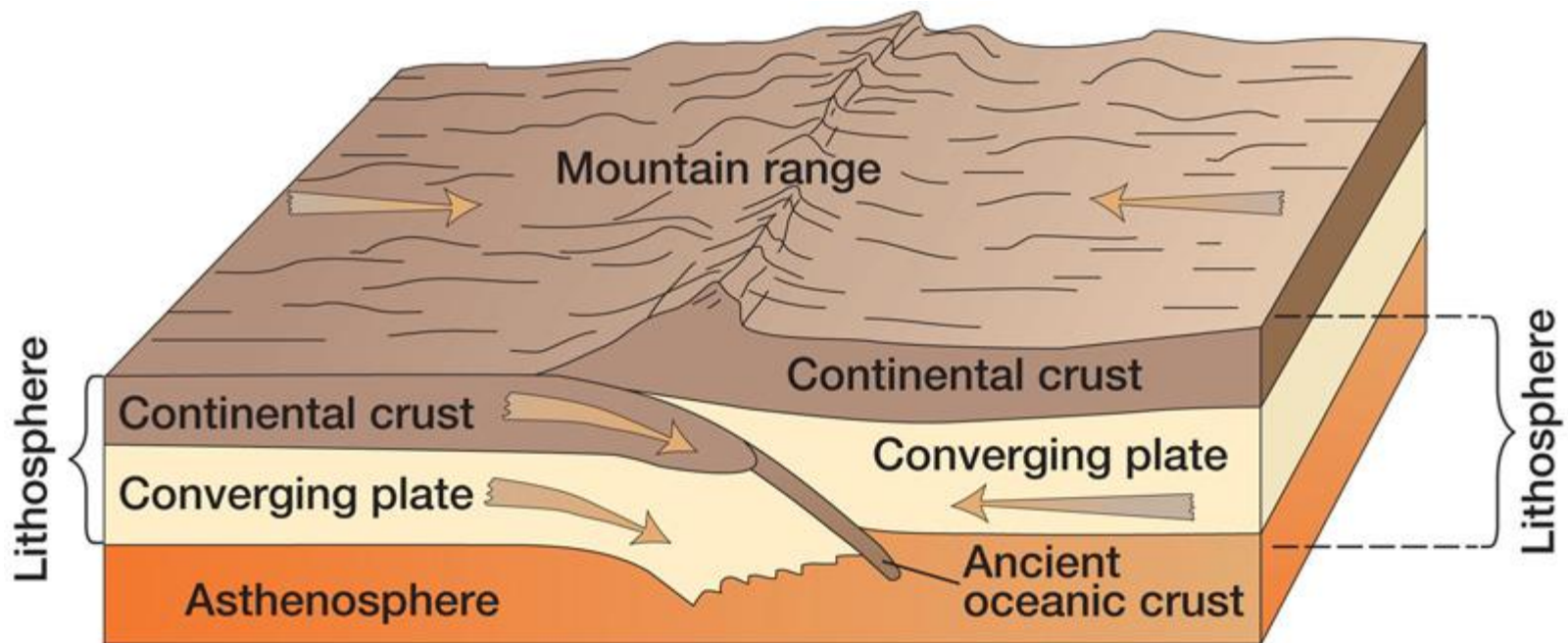
Convergent Boundary: When plates collide

- Convergent- Subduction Boundary: When plates collide and one plate is forced under the other. As the bottom plate melts, magma rises and forms volcanoes.



Convergent Boundary

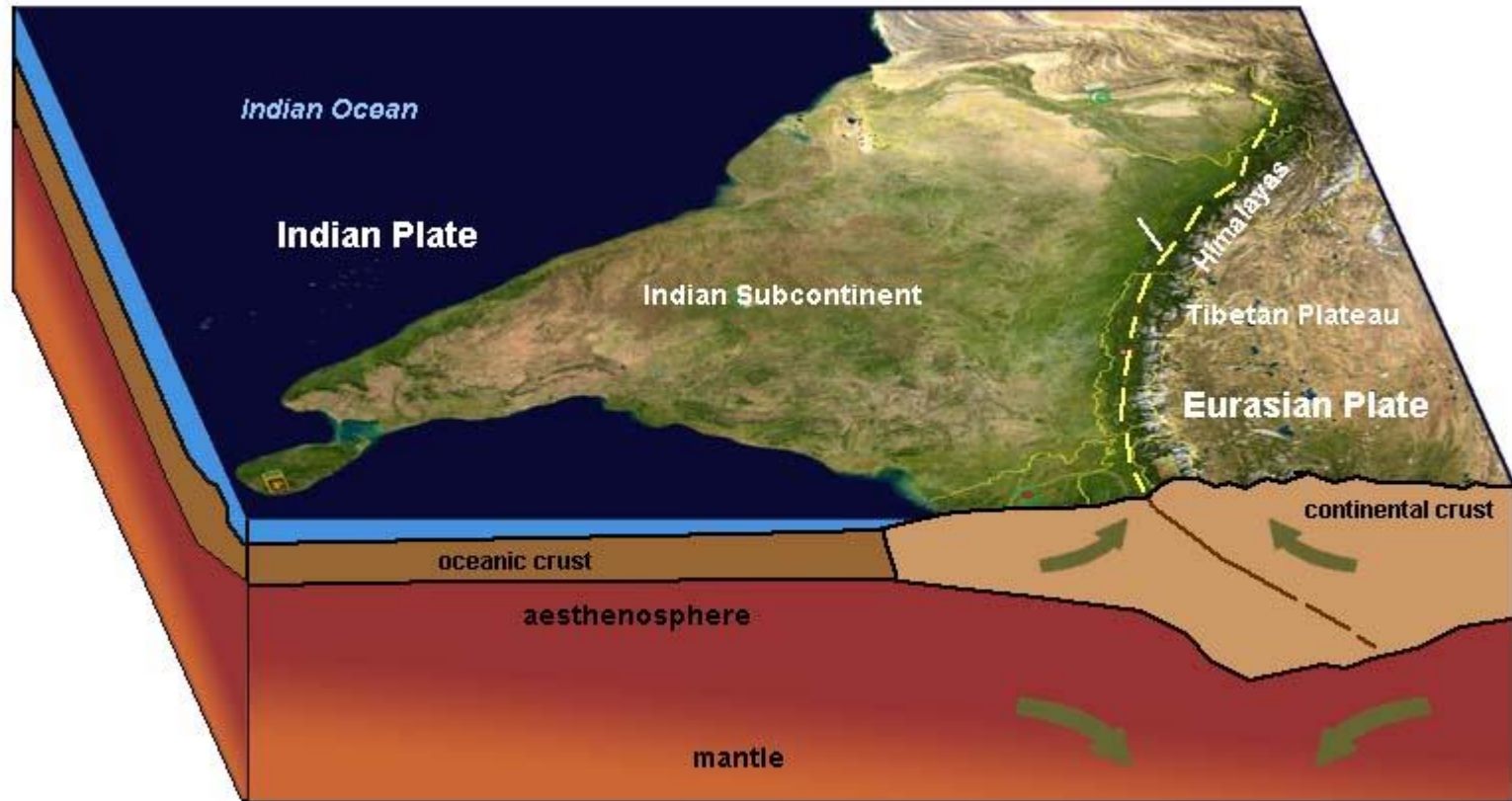
- Convergent-Collision Boundary: When plates collide and the plates buckle and fold
- creates mountain ridges



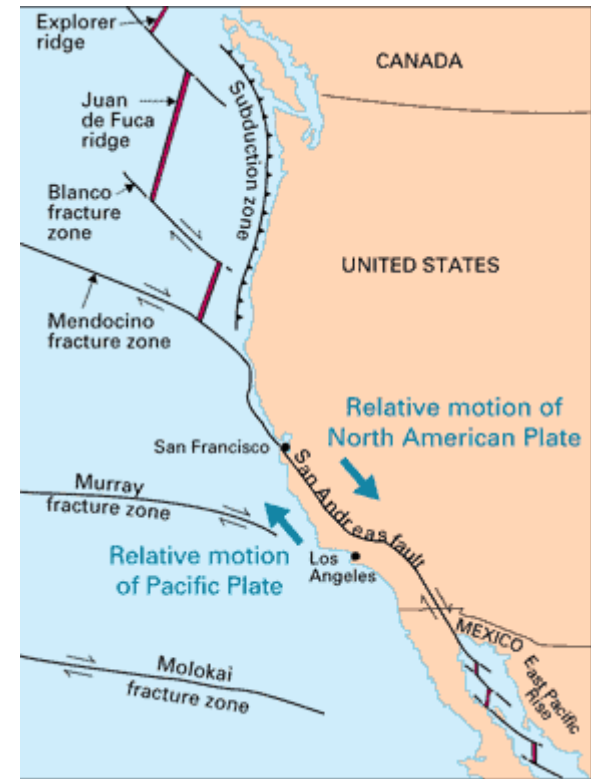
(c)



Convergent Collision



Transform Movement: When plates slide next to each other

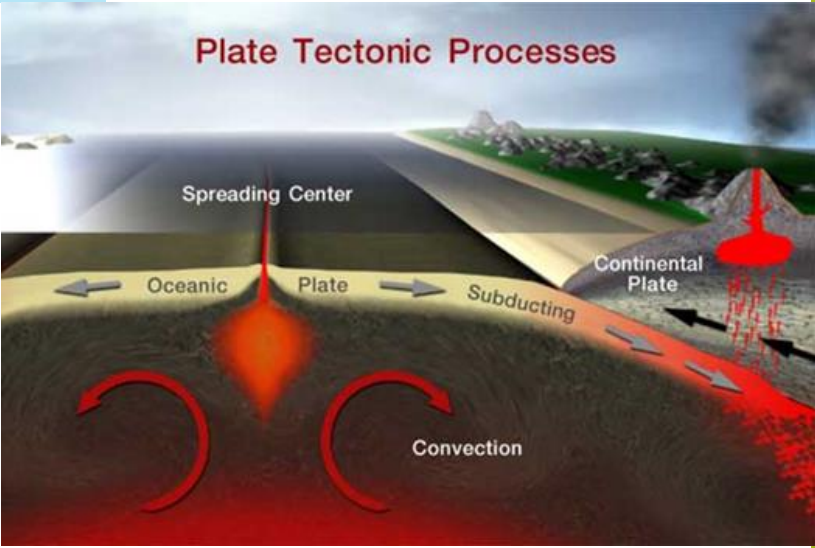


Fault: fracture in the earth's crust



Ring of Fire: A zone around the rim of the Pacific Ocean with the majority of active volcanoes and earthquakes in the world



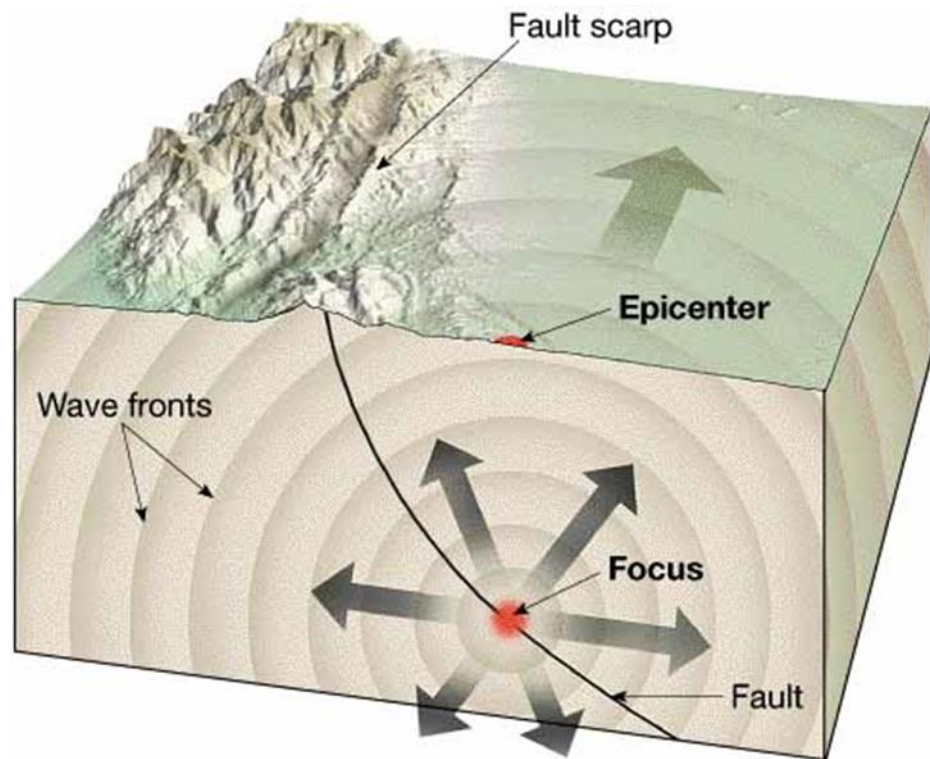
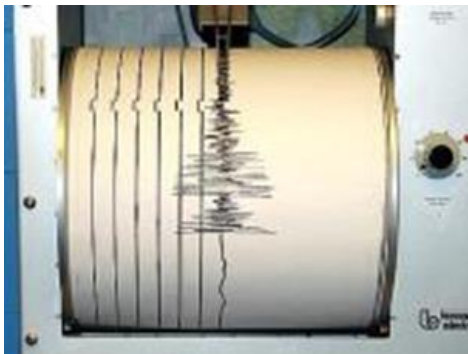


Earthquake

- Earthquake: Shaking caused by plates grinding against each other or colliding
- Epicenter: focus of earthquake
- Seismograph: device to detect earthquake
- Richter Scale: measures strength of earthquake

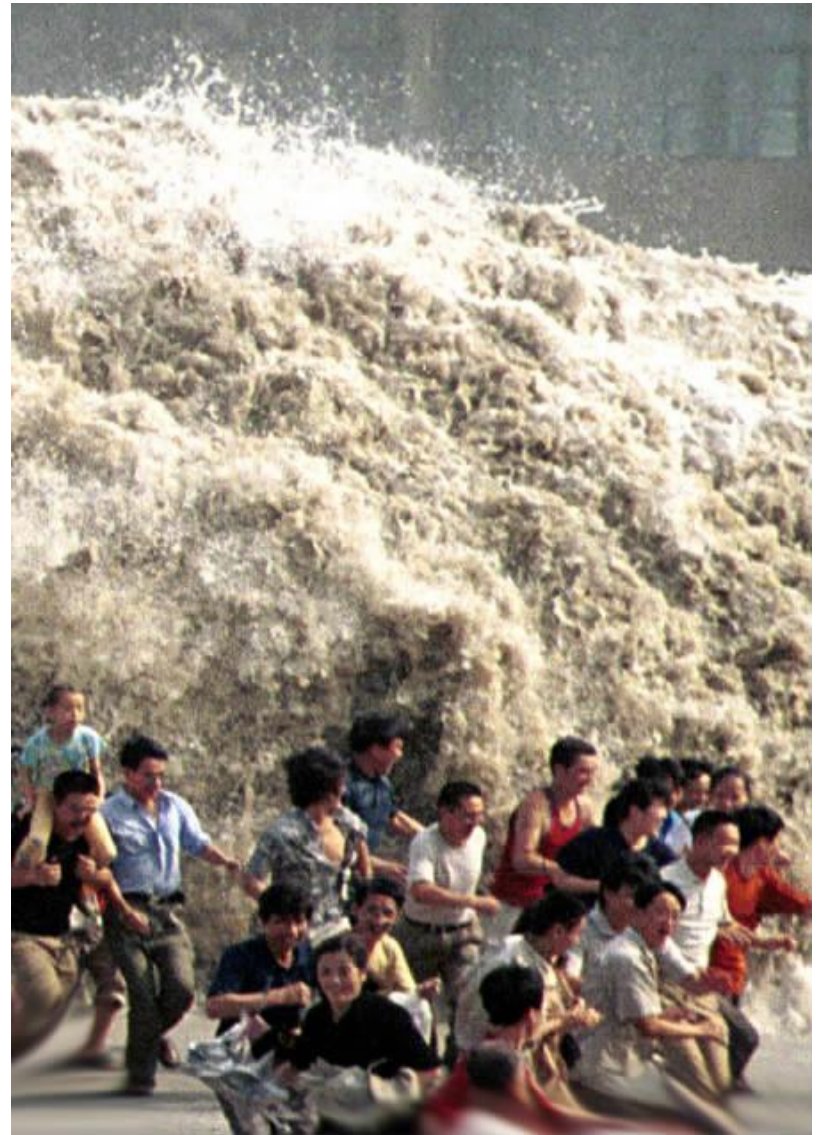
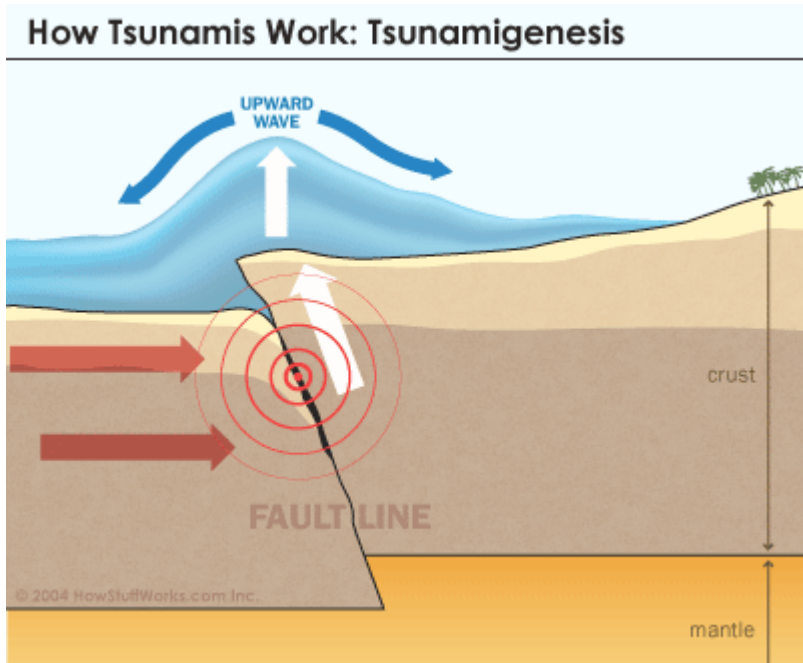
Description	Magnitude (Richter Scale)	Number Per Year	Approximate energy released (ergs)
Great Earthquake	over 8.0	1 to 2	$> 5.8 \times 10^{23}$
Major Earthquake	7.0 - 7.9	18	$2 - 42 \times 10^{22}$
Destructive Earthquake	6.0 - 6.9	120	$8 - 150 \times 10^{20}$
Damaging Earthquake	5.0 - 5.9	800	$3 - 55 \times 10^{19}$
Minor Earthquake	4.0 - 4.9	6,200	$1 - 20 \times 10^{18}$
Smallest Usually Felt	3.0 - 3.9	49,000	$4 - 72 \times 10^{16}$
Detected But Not Felt	2.0 - 2.9	300,000	$1 - 26 \times 10^{15}$

Table 4. Worldwide Earthquakes. (Data from Table 10.1, Carla W. Montgomery, "Fundamentals of Geology," Wm. C. Brown, 1993 -- original data taken from Gutenberg and Richter, "Seismicity of the Earth and Associated Phenomena," Princeton University Press, 1954.)



Tsunami

- Large wave caused by an earthquake



Japanese Tohoku Tsunami

March 11, 2011

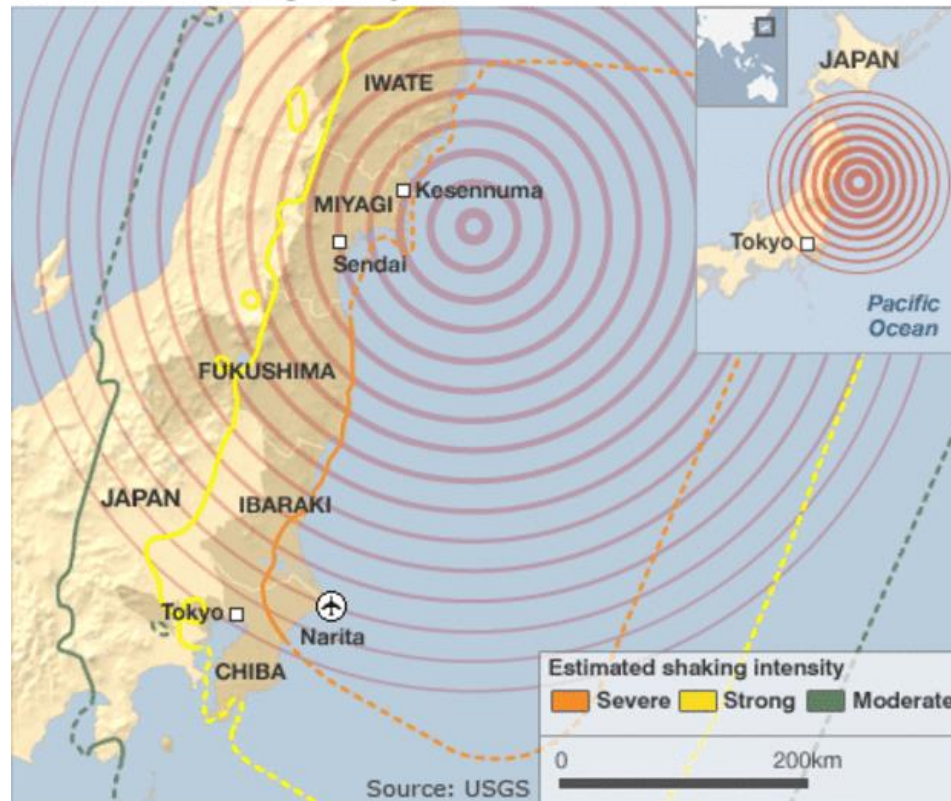
- 9.0 Earthquake off coast of Japan



Japanese Tohoku Tsunami

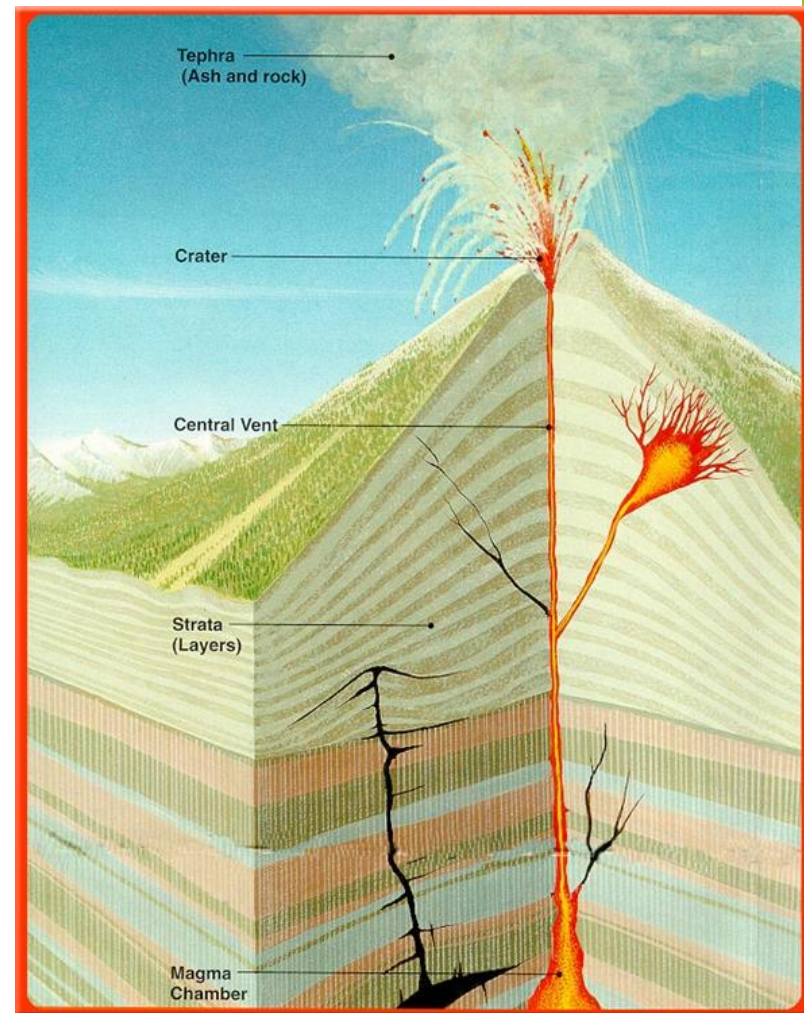
March 11, 2011

Areas affected by the quake

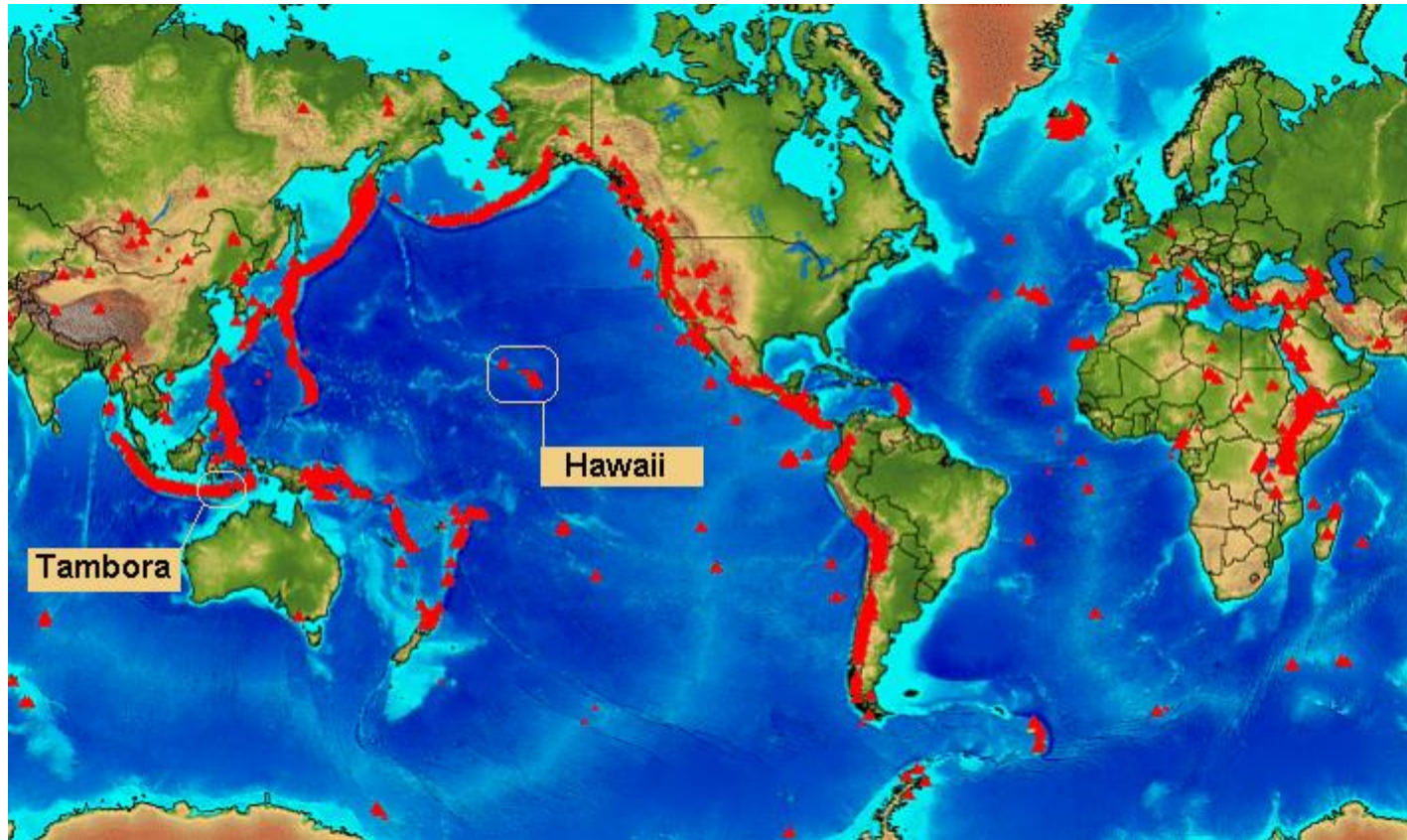


Volcanoes

- Magma seeps up through cracks in the surface
- Found along plate boundaries



Active Volcanoes in the World

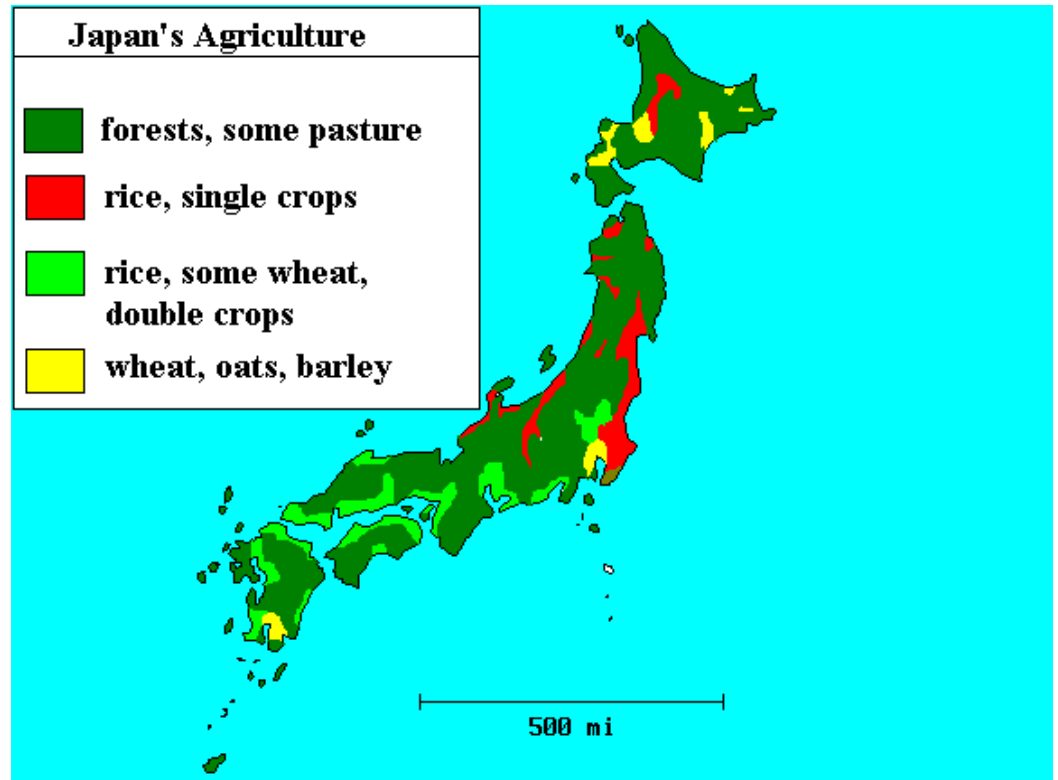


Japan



- Physical constraints
 - 16% of the land is habitable.
- Efficient management of existing agricultural land.

Japanese Terrain



Mount Fuji



Largest mountain in Japan. Last erupted in 1707

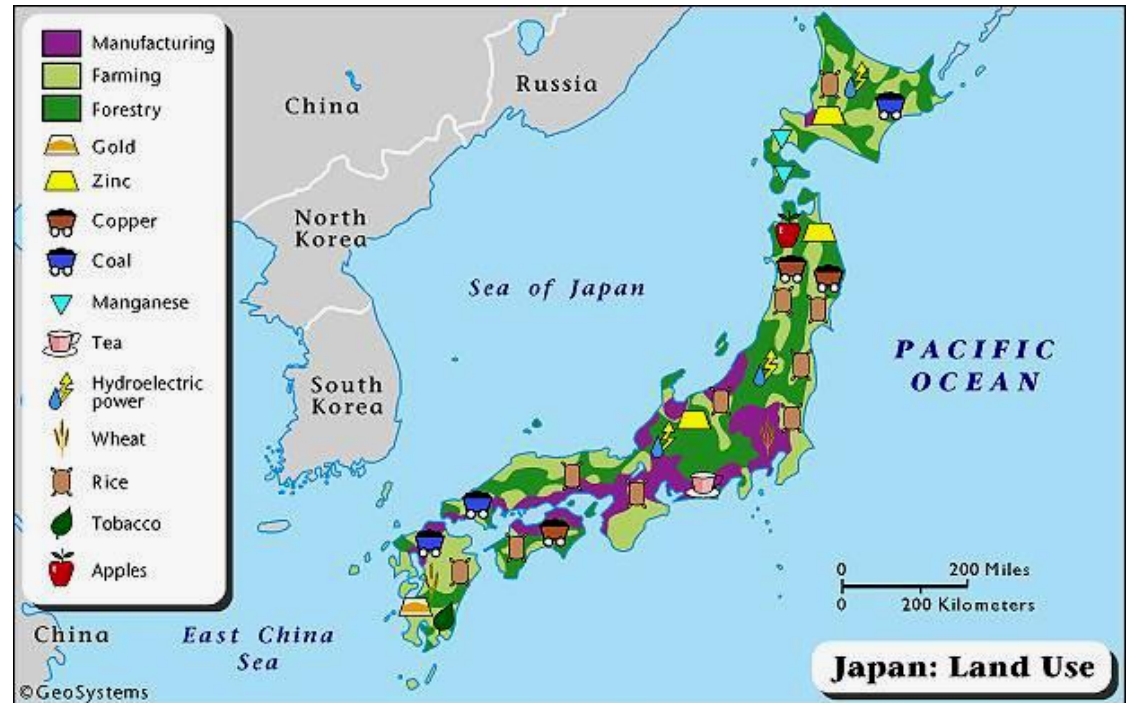
Japan: Vegetation

2/3 of the entire country is forested and the Japanese make use of wood in almost endless ways

Raw Materials and Resources

Natural Resources

- Lacking many natural resources
 - Forced to trade with other nations
 - Led to imperialism in past
- Terrain is mostly forest
- Most food comes from sea due to lack of arable land



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