

Course Material

Understanding China for Pakistan

Lectures on **GEOGRAPHY**



Presented on
September 27, 2018



Further Reading on Geography on China

- **Geography and the Early Settlement of China**

How did geography affect life in ancient China?

- **The Living Geography of China**

Author(s): MIKE MORRISH

Source: Geography, Vol. 82, No. 1 (January 1997),
pp. 3-16

Published by: Geographical Association

Stable URL: <http://www.jstor.org/stable/40572861>

Accessed: 17-09-2017 13:41 UTC



- **A Preliminary Review of Research on the Physiographic Regionalisation of China**

Author(s): S. X. Ni

Source: Area, Vol. 17, No. 1 (Mar., 1985), pp. 19-24

Published by: The Royal Geographical Society (with the Institute of British Geographers)

Stable URL: <http://www.jstor.org/stable/20002115>

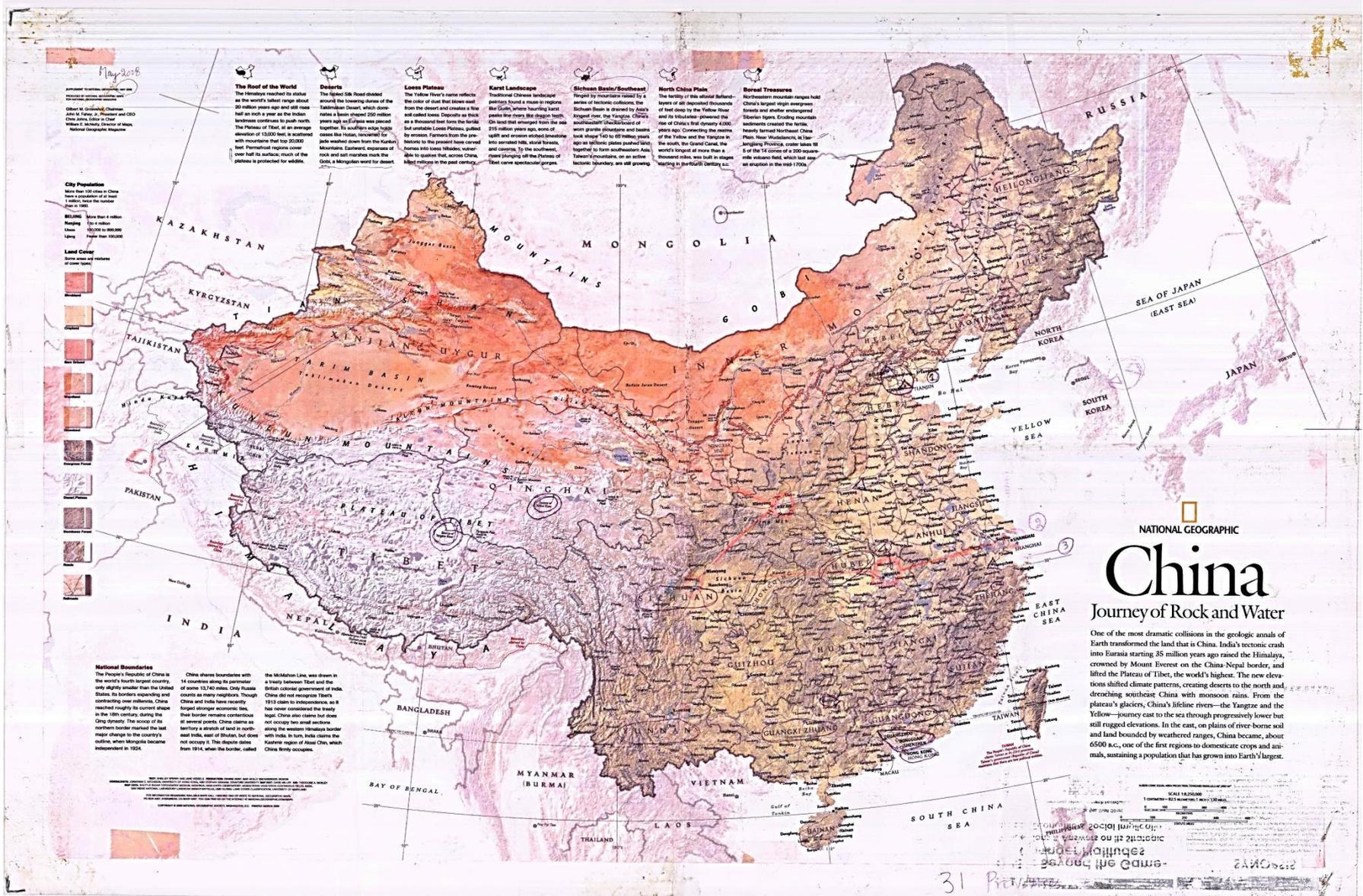
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Part 1:

MAP OF CHINA





China

Journey of Rock and Water

One of the most dramatic collisions in the geologic annals (a record of events, especially a yearly record) of Earth transformed the land that is China. India's tectonic crash into Eurasia starting 35 million years ago raised the Himalaya, crowned by Mount

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Everest on the China-Nepal border, and lifted the Plateau of Tibet, the world's highest. The new elevations shifted climate patterns, creating deserts to the north and drenching southeast China with monsoon rains. From the Plateau's glaciers, China's lifeline rivers - the Yangtze

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and the Yellow - journey east to the sea through progressively lower but still rugged elevations. In the east, on plains of river-borne soil and land bounded by weathered ranges, China became, about 6500 B.C, one of the first regions to domesticate crops and animals, sustaining a population that has grown into Earth's largest.



National Boundaries

The People's Republic of China is the world's fourth largest country, only slightly smaller than the United States. Its borders expanding and contracting over millennia, China reached roughly its current shape in the 18th century, during

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the Qing dynasty. The scoop of its northern border marked the last major change to the country's outline, when Mongolia became independent in 1924. China shares boundaries with 14 countries along its perimeter of some 13,740 miles. Only Russia counts as many neighbors. Though China and India have

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recently forged stronger economic ties, their border remains contentious at several points. China claims as territory a stretch of land in northeast India, east of Bhutan^{1 1.1} , but does not occupy it. This disputes dates from 1914, when the border, called the McMahon Line², was drawn in a treaty between Tibet and the

1-https://en.wikipedia.org/wiki/Bhutan%E2%80%93China_relations, <http://www.bbc.com/news/world-asia-china-42834609>

2 https://en.wikipedia.org/wiki/McMahon_Line

British colonial government of India. China did not recognize Tibet's 1913 claim to independence, so it has never considered the treaty legal. China also claims but does not occupy two small sections along the western Himalaya border with India. In turn, India claims the Kashmir Region of Aksai Chin³, which China firmly occupies.

3-https://en.wikipedia.org/wiki/Aksai_Chin

The Roof of the World

The Himalaya⁴ reached its status as the world's tallest range about 20 million years ago and still rises half an inch a year as the Indian landmass continues to push north.

4- <https://en.wikipedia.org/wiki/Himalayas>

The plateau of Tibet⁵, at an average elevation of 13,000 feet, is scattered with mountains that top 20,000 feet. Permafrost (frozen subsoil) regions cover over half its surface; much of the plateau is protected for wildlife.

5- https://en.wikipedia.org/wiki/Tibetan_Plateau



Deserts

The fabled Silk Road divided around the towering dunes of the Taklimakan⁶ Desert, which dominates a basin shaped 250 million years ago as Eurasia was pieced together. Its southern edge holds

6- https://en.wikipedia.org/wiki/Taklamakan_Desert

oases like Hotan, renowned for jade washed down from the Kunlun Mountains. Eastward, expanses of rock and salt marshes mark the Gobi⁷, a Mongolian word for desert.

7-https://en.wikipedia.org/wiki/Gobi_Desert



Loess Plateau⁸

The Yellow River's name reflects the color of dust that blows east from the desert and creates a fine soil called loess. Deposites as thick as the thousand feet from the fertile but unstable gullied by erosion⁸.

⁸-https://en.wikipedia.org/wiki/Loess_Plateau

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Farmers from the pre-historic to the present have carved home into loess hillsides, vulnerable to quakes that, across China, killed millions in the past century.



Karst Landscape

Traditional Chinese landscape painters found a muse (to think or meditate in silence) in regions like Guilin⁹, where haunting karst¹⁰ peaks line rivers like dragon teeth. On land that emerged

9- <https://en.wikipedia.org/wiki/Guilin>

10- <https://en.wikipedia.org/wiki/Karst>

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from the sea 215 million years ago, eons of uplift and erosion etched limestone into serrated hills, stone forests, and caverns. To the southwest, rivers plugging off the Plateau of Tibet carve spectacular gorges

(a narrow cleft with steep, rocky walls, especially one through which a stream runs.).



Sichuan Basin/Southeast

Ringed by mountains raised by a series of tectonic collisions (phenomenon of the plate tectonics of Earth that occurs at convergent boundaries.), the Sichuan Basin¹¹ is drained by Asia's longest river, the Yangtze. China's southeastern checkerboard of

11-https://en.wikipedia.org/wiki/Sichuan_Basin

worn granite mountains and basins took shape 140 to 65 million years ago as tectonic plates pushed land together to form southeastern Asia. Taiwan's mountains, on an active tectonic boundary, are still growing.



North China Plain

The fertility of this alluvial (unconsolidated soil) flatland layers of silt deposited thousands of feet deep by the Yellow River and its (tributaries(a stream that flows to a larger stream or other body of water) powered the rise of China's first dynasty 4,000 years ago.

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Connecting the realms of the Yellow and the Yangtze in the south, the Grand Canal¹², the world's longest at more than thousand miles, was built in stages starting in the fourth century B.C.

12- [https://en.wikipedia.org/wiki/Grand_Canal_\(China\)](https://en.wikipedia.org/wiki/Grand_Canal_(China))



Boreal Treasures

Northeastern mountain ranges hold China's largest virgin evergreen forests and shelter endangered Siberian¹³ tigers. Eroding mountain sediments created the fertile, heavily farmed Northeast China Plain.

13-<https://en.wikipedia.org/wiki/Siberia>

Near Wudalianchi¹⁴, in Heilongjiang Province, crater lakes¹⁵ fill 5 of the 14 cones of a 200 square mile volcano¹⁶ field, which last saw an eruption in the mid-1700s.

14- <https://en.wikipedia.org/wiki/Wudalianchi>

15- https://en.wikipedia.org/wiki/Crater_lake

16- https://en.wikipedia.org/wiki/Volcanic_cone



Part 2:

CHAPTER ON GEOGRAPHY BY Barry Naughton



China is the most populous nation, and it is also one of the largest countries, with the third-biggest landmass, after Russia and Canada. Its land area is 2% greater than that of the United States, which it resembles geographically. The two countries cover similar latitudes and a similar range of climatic conditions, and these similarities lead to numerous parallels between regions in the eastern half of both countries. The climate of Guangzhou (Canton) is like that of Miami, and the climate of the Northeast (Manchuria) is similar to that of Minnesota. The great difference between China and the United States is that China is far more rugged and more of the land is inhospitable. Most of China consists of hills, mountains, and high plateaus, broken by river valleys and a few plains and basins. In the west, China borders on the vast deserts of inner Asia. Mount Everest, the highest mountain in the world, is on the China–Nepal border, while the Turfan depression in Xinjiang, 155 meters below sea level, is the third-lowest place on earth. Only 25% of China is less than 500 meters (1,640 feet) above sea level, compared to 60% of North America and 80% of Europe. Although China historically was a nation of farmers, only a small proportion of the land is arable. The largest plains in China cover only a fraction of the area of the vast central plain of the American Midwest. China is big, rugged, and diverse.

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China has only a single seacoast. Moreover, China's eastern seaboard is not particularly accessible. Most of the southern part of the coast is rugged and hilly, so that the occasional good harbors tend to be cut off from the inland regions. In the north, especially between the Yangtze and the Shandong Peninsula, the coast is low and swampy with few good harbors. Reflecting these geographic conditions, China's traditional economy was inwardly oriented. There were outward-oriented, seafaring subcultures, but these tended to be fenced off in the southeast coast, which was economically peripheral. China thus contrasts sharply with northern Europe and with Japan, Taiwan, and Korea, with their strong seagoing and commercial traditions. The lack of a coastal

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orientation contributed to China's late start in economic modernization. Indeed, China's links to the modern world economy really began to multiply only when foreign-dominated Treaty Ports were forcibly implanted into China's key economic regions after 1842. Even today, the vast interior places huge demands on China's economic capacity and will have lasting ramifications on future development. Since 1999, China has been committed to the Western Development Program, targeting investment and giving policy preferences to the western and inland regions. This government program reflects the fact that the west lags economically, while the coasts have surged ahead and have been firmly linked to the ocean transport web and the global economy.

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1.1 LANDFORMS

The entire Chinese landmass tilts from west to east. The Himalayas are a young mountain range, still rising by several feet per century because of the collision of the Indian subcontinent with the Asian landmass. This mountain-building process shapes the whole topography of China, creating a series of mountain ranges that are high and rugged in the west and taper off to low hills in the east. Broadly speaking, the land of China forms three great “steps” in elevation. The top step is made up of the frigid Tibetan Plateau, which *averages* more than 4,000 meters (over 13,000 feet) above sea level and contains the world’s highest mountains. The second step consists of a series of plateaus and basins with an elevation of between 1,000 and 2,000 meters (between 3,000 and 7,000 feet). These include the basins in arid northwestern China (such as the Tarim and Junggar basins), the Inner Mongolian Plateau and Loess Plateau in northern China, and the Yunnan-Guizhou Plateau in southwestern China. The third step consists of the plains and low hills of eastern China, where the elevation is generally below 500 meters. Even in the east, ranges of relatively low mountains create barriers to north–south transport.

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The three most important rivers in China, the Yangtze (Changjiang), Yellow (Huang), and Pearl (Zhujiang) rivers, all flow from west to east in accord with the basic topography. Even the great rivers of South and Southeast Asia, including the Mekong and Ganges, originate within China on the Tibetan highland and initially flow east before turning south and cutting through mountain ranges on the way to the southern seas (see Figure 20.2, p. 501). The western half of China is high and arid, and the population is sparse. A line drawn from the town of Aihui in the northeast province of Heilongjiang to Tengchong in the southwest province of Yunnan (the Aihui–Tengchong line; Figure 1.1)



divides the area of China in half. But only 6% of the population lives in the dry, mountainous west; 94% of the population lives in the eastern half of the country. The area west-northwest of the Aihui–Tengchong line has a population density of only 11 people per square kilometer, about one-quarter the world’s average. Within this vast area, the Tibetan Plateau contains a quarter of the land area of China but less than 1% of the population. The northwest region supports about 4.5% of the population, mostly in a few basins and scattered oases. Shortage of available water sharply limits the population potential of the western regions. East-southeast of the Aihui–Tengchong line, the country is lower in elevation, and water is comparatively abundant. This half is considered “monsoon China,” receiving abundant watering by the summer rains. The population density in this area is 260 people per square kilometer, about six times the world’s average population density.

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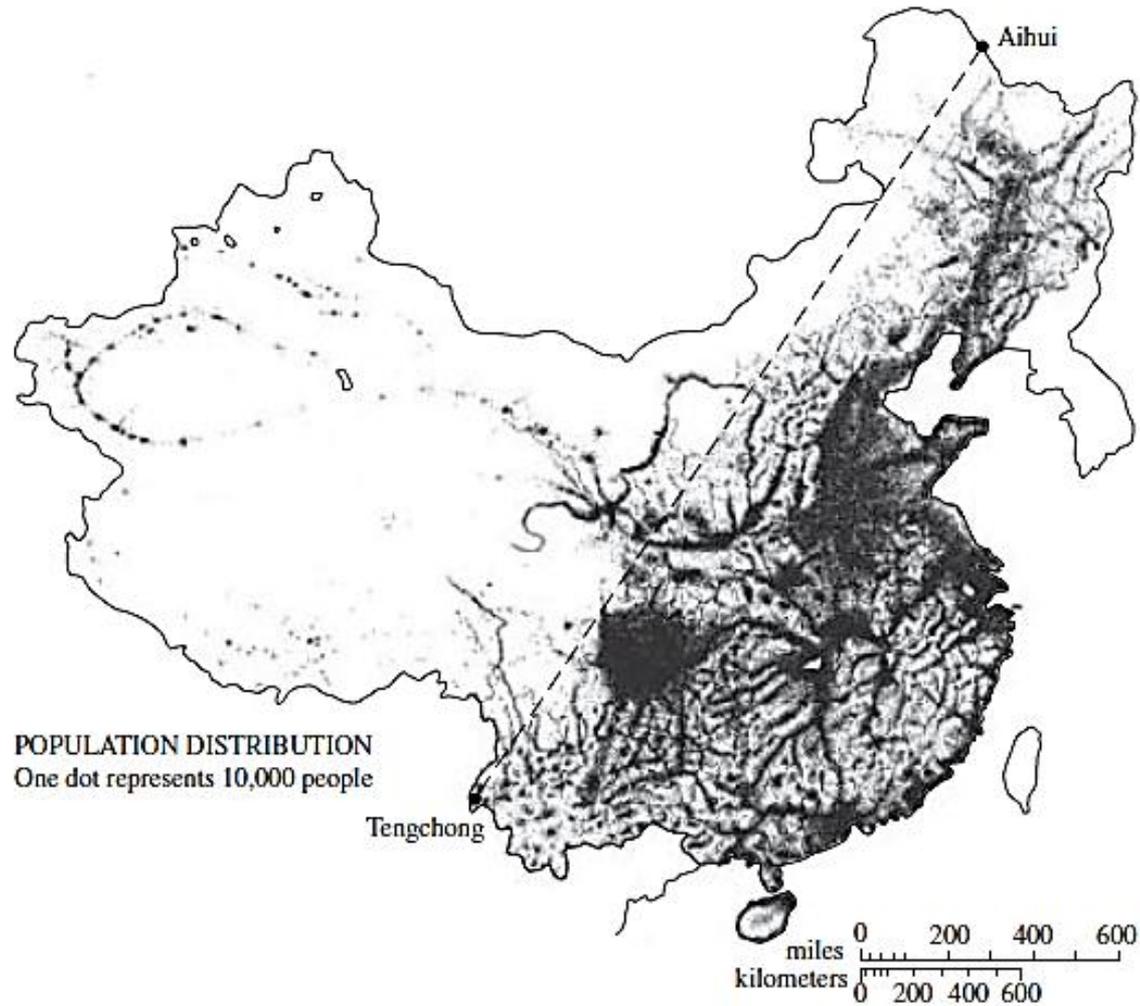


Figure 1.1
Population distribution representing 10,000 people and the Aihui-Tengchong line

Table 1.1
Land and population, 2002

	Land area (1) (million hectares)	Arable land (2) (million hectares)	Arable percent (2)/(1) × 100	Population (million)	Arable per capita (hectare)
China	933	143	15.3	1,280	0.11
India	297	162	54.4	1,049	0.15
United States	916	176	19.2	288	0.61
Russia	1,689	123	7.3	144	0.86

A hectare is a square 100 meters on each side, equal to about 2.5 acres.

China's hilly and complex terrain means that relatively little of the land is suitable for cultivation. The good agricultural land lies in the fertile plains and valleys of the major river systems, separated from one another by hills and mountains. Only 15 percent of China is arable (Table 1.1), and there is very little land potentially suited for cultivation not already exploited. The United States has more arable land than China but less than one-fourth the population. Per capita arable land in China is only one-tenth of a hectare, or one-quarter of an acre. This is the size of a modest suburban home lot in the United States. Over the centuries China has adapted to land scarcity with a labor-intensive agriculture that wrests more total food grain from the soil than any other country.

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1.2 CLIMATE AND WATER

The climate of China is dominated by the southeast monsoon, which sets the distinctive pattern of wet summers and dry winters. In winter there is little rain or snow anywhere in China. A high-pressure zone is established over central Asia, creating a steady flow of cold, dry air over all of eastern China. But in the summer, heating of the entire Asian landmass creates a low-pressure area over central Asia that draws tropical maritime air, saturated with moisture, into southeastern China. As this air encounters mountain ridges and cooler air masses, rains fall abundantly on southern China. As a result, the coast stays relatively cool while the inland basins become very hot, particularly in the “four furnaces” of central China (Chongqing, Wuhan, Changsha, and Nanjing) and in the western deserts.

As the summer monsoon moves northwest, it loses strength and delivers less rain (Figure 1.2). Overall the north is dry while the south is lush and drained by numerous waterways. The difference is reflected in an ancient saying about traditional means of transport: “South, boat; North, horse.” Usually, the monsoons push over the belt of mountains between the Yangtze and Yellow River



basins, providing modest summer rains in northern China. In bad years, however, the monsoons are too weak to cross over to the Yellow River valley and become stuck over the central mountain belt. In those years, north China is struck by drought, while the rains hover over southern China, flooding the countryside. This central mountain range, then, creates another fundamental dividing line between south China, with abundant water, and north China, which is chronically short of water.

In fact, China is an arid country overall. In the Northwest, the margin of human habitation is defined by a continual tug of war with the desert, which threatens to advance, rolling over farmlands. The Aihui–Tengchong line marks this frontier between adequate and insufficient water. In the north, the Yellow River flows almost entirely through arid and semiarid country. The vast population of northern China creates enormous demands on Yellow River water. One of the great rivers of the world, 4,800 kilometers long, but of only moderate total volume, the Yellow River literally runs dry in many years, as

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withdrawals take *all* the available water. A record was reached in 1997, when there was no water in the downstream stretches of the Yellow River for 226 days (Liu 1998, 899). Furthermore, the Yellow River carries a heavy load of dissolved mud and sand, 1.6 billion tons every year, and drops one-fourth of it on the riverbed. This raises the river bed about 10cm each year, so that today the river—held between a line of dikes on either side—flows along an elevated path, always threatening to flood the surrounding, lower countryside when water does come. By contrast, in lush southern China, the Yangtze is only a little bit longer than the Yellow River but carries 20 times as much water. The Yangtze flows abundantly year-round, carrying one-third as much total sediment as the Yellow River. Even the Pearl River system carries six times as much water as the Yellow River. All the rivers rise and fall in rhythm with the monsoon. Reaching their lowest point around February, the rivers rise steadily until August or September, at which point they flow mightily, barely held within their dikes and covering vast floodplains.

In relation to its enormous population, China is short of arable land, forests, and water, ensuring that China's environmental problems will be extremely severe. When account is taken of the highly uneven distribution of resources and population—especially the scarcity of water in the north and west—it is clear that enormous problems of environmental degradation challenge China. Indeed, China will inevitably be in a kind of permanent environmental crisis for the next 50 years or so, as economic growth pushes up against the limits of what the land can support (Chapter 20).

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The Geographical Setting

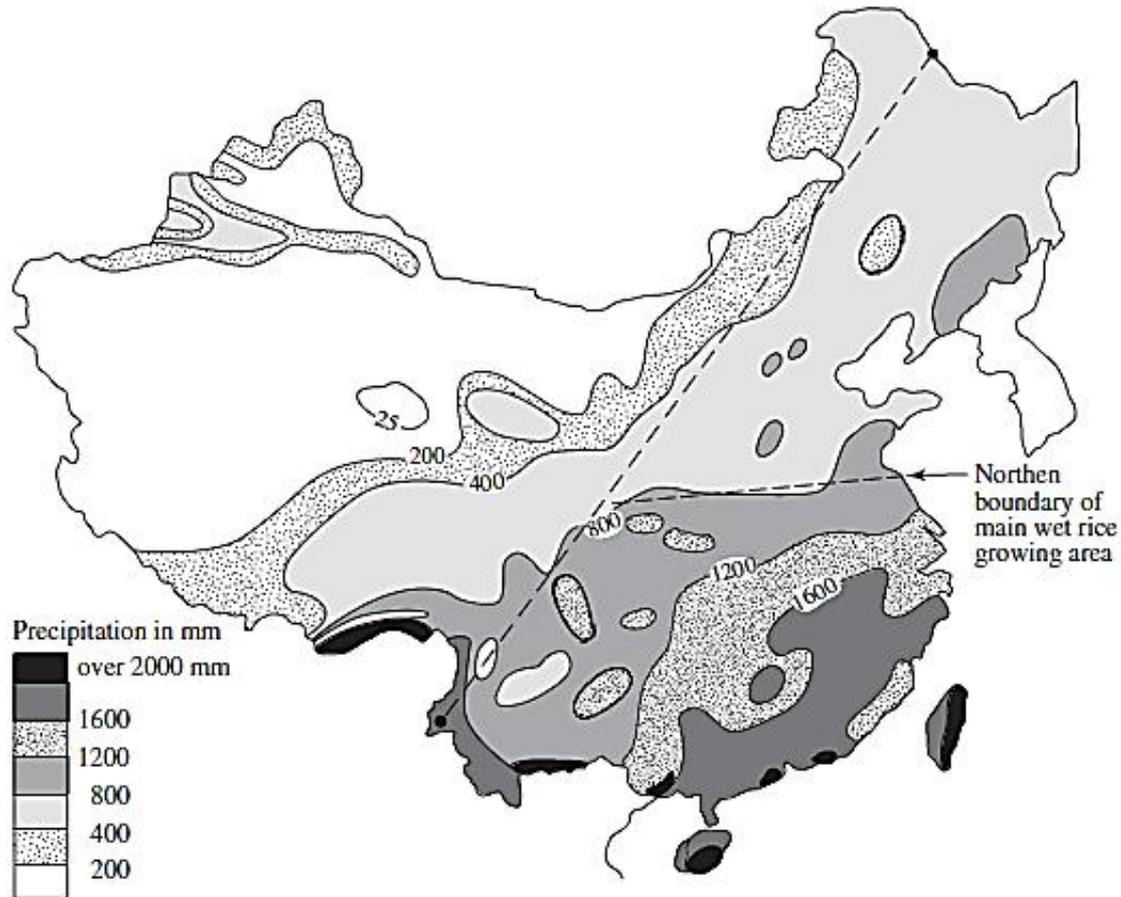


Figure 1.2
Annual precipitation

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1.3 PROVINCES AND REGIONS

The most familiar way to divide China's vast space is into provinces. China currently has 31 province-level administrative units. Some Chinese provinces have more people than most countries: Henan, the most populous, hit 97 million in 2004, while Tibet has the smallest population, with only 2.7 million. China maintains an official distinction between provinces (22), municipalities under national supervision (4), and autonomous regions of ethnic minorities (5). These all have province-level "rank" in the national administrative system, and we will use the term "province" to refer to all of them. Some provinces have identities that trace back more than two millennia; two of them, however, are recent creations: Hainan Island was carved out of Guangdong Province in 1988; and Chongqing Municipality was separated from Sichuan Province in 1997. In addition, there are now two special autonomous regions (SARs) of China, Hong Kong (since 1997) and Macau

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(since 1999). These are never treated as provinces. Figure 1.3 shows the provinces of the People's Republic of China.

Provinces are not always the most natural way to divide up China's economic space. Another approach, following anthropologist William Skinner, is to divide Chinese territory into "macroregions" defined by the rugged topography. Each macroregion spreads over more than one province and consists of a densely settled core area and a less densely settled and often hilly periphery. Although it is possible to divide all of China into macroregions, not all macroregions are equal: we will look at several of the most important (Figure 1.4). The most important macroregion is North China. The North China Plain is by far the largest flat land area in China, and it contains a little over one-quarter of China's total farm land as well as slightly over one-quarter of the total population (in Figure 1.4 densely populated core areas show up as dark

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areas). The national capital, Beijing, serves as the urban center of North China, and along with its sister city, Tianjin, has a total population of around 20 million. Size, location, and the national capital make North China the most important region of China. In spite of the importance of the Beijing–Tianjin metropolis, the Plain as a whole is predominantly rural, with large villages spread thickly and fairly evenly over the entire expanse. Many areas in the plain are not irrigated; as a result, they are dependent on unreliable rains and subject to periodic droughts and floods. The primary staple crop is wheat, although some areas do well producing economic crops such as cotton and peanuts. While sheer size gives North China a predominant importance among China's regions, it is rather average in terms of development levels. The 27% of total national population that lives there produces 30% of the industrial output and 31% of the crop output of the entire nation.

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The most developed part of China is the Lower Yangtze macroregion. At the center of the region is the metropolis of Shanghai, economically the most important city in China. Ten percent of China's population lives in the Lower Yangtze, but the region produced 21% of China's GDP in 2003. Incomes are higher and urbanization rates significantly greater than in any other area of China. Indeed, in recent years industrial production has spread so rapidly into the countryside that many areas classified as rural are more realistically thought of as urbanized countryside. For centuries, this was the richest part of China, and during the last decade its growth has been well above the national average, so the Lower Yangtze is regaining its predominant role in the Chinese economy. The Yangtze River Delta, covering 50,000 square kilometers, is one of the great river deltas of the world. Wet rice cultivation is dominant, and typically two or more crops are harvested per year. The country is lush and green, with water everywhere. The intensely cultivated countryside, comprising 7% of China's arable land, produces 10% of crop output.

Adjacent to the North China Plain, and tied to it by numerous economic links, is the region of the Northeast, or Manchuria. The Northeast is a region of abundant natural resources: 9% of China's population here cultivates 17% of the arable land, and rich reserves of iron ore, coal, and petroleum have made the Northeast the center of China's heavy industry. Since the beginning of the twentieth century, Chinese settlers have been braving the harsh winters to reclaim farmland from the northern forests of this region. The relative abundance of land has encouraged relatively high levels of agricultural mechanization and made the region an exporter of food grains and soybeans to the rest of China. The industrial center is at Shenyang, in Liaoning, which is surrounded by a ring of eight medium-sized industrial cities, including Anshan, site of China's oldest steel mill. But over the past two decades, the Northeast

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has struggled: the number of factory jobs in state-run industry has shrunk; the region has lost the important role it played in the national planned economy; and growth has lagged. From being a richer part of China, the Northeast has become average, 9% of the people producing 10% of GDP in 2003.

The economies of the North, Northeast, and Lower Yangtze macroregions have had very different trajectories in recent years. Historically, the link between the North China Plain and the Lower Yangtze made China into a single economic entity: the Grand Canal was built to ship the food grain surpluses of the lower Yangtze to the national capital region in the northern plain. Today, the Beijing–Shanghai link still defines the central axis of the economy. For a period in the mid-twentieth century, the mineral and land resources of the Northeast, along with the creation of its heavy industrial base, led it to be highly integrated into socialist, industrializing China. But in the past 20 years, the Northeast has become somewhat marginalized, losing its centrality to the Lower Yangtze. These three interacting regions make up the bulk of the Chinese economy; together they contain 46% of China’s population and 51% of its farmland, and together they produced 55% of GDP in 2003.

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The remaining Chinese macroregions are much less tightly integrated into a single national economic system. The provinces in the middle reach of the Yangtze—Hubei, Hunan, and Jiangxi—entered the reform era at Chinese average levels of development but have lagged behind the rapidly growing coastal regions. These provinces hold 13% of China's population but produced only 9.5% of 2003 GDP. The land is generally irrigated and intensely cultivated: it contains only 10% of China's arable land but produces 14% of the crop value. In contrast to the Lower Yangtze, where the agricultural economy is extremely diversified, the Middle Yangtze primarily produces grain. This grain monoculture enables the region to export significant surpluses of grain to other regions of China. The major urban center is Wuhan, which has trade and industrial roles that extend beyond the region.

Following the Yangtze further upstream, one arrives in Sichuan, a huge inland basin entirely surrounded by high mountains that is the core of the Upper Yangtze macroregion. Fertile and densely populated, there is no similar geographical feature anywhere else in the world. The Sichuan basin is now divided into two provinces, Chongqing municipality and Sichuan Province, which together have a 2004 population of 118 million. There is no natural route into or out of the Sichuan basin, and even the Yangtze River, as it flows out of Sichuan, cuts its way through spectacular and treacherous mountain gorges. This is where the huge and controversial Three Gorges Dam across the Yangtze was built, and the gorges are being inundated by a gradually filling

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reservoir. Chongqing and Chengdu (the capital of Sichuan Province) divide between them the functions of urban centers for the Upper Yangtze macroregion. Near the Sichuan basin, and linked to it by extensive economic and transport ties, is the Yunnan-Guizhou plateau, labeled the Southwest China macroregion in Figure 1.4. The Chinese government usually lumps the provinces of Yunnan and Guizhou in with Sichuan and Chongqing to form a greater Southwest China region. These four provinces have diverse topographies, but all have a dense population and a common low income. The GDP per capita is only about half the national average: 15.5% of China's population here produces 8.5% of GDP.

Figure 1.4 shows two macroregions along the southeast coast. Both these macroregions have long been oriented outward toward ocean-borne trade, while most of China was oriented inward. John King Fairbank suggested that "maritime China" was a distinct region and subculture within Chinese civilization. Maritime China is the homeland of most of the Overseas Chinese who left China before 1949. It is cut off from much of the rest of China by the mountain chains that define a narrow coastal strip. There is little hinterland, and communication was traditionally up and down the coast by boat. The one large core area along the coast is the fertile Pearl River Delta, the heart of Guangdong Province. The Pearl River Delta has long supported an extremely rich diversified agriculture and a correspondingly dense population, with both Guangzhou and Hong Kong serving as urban centers.

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In recent years the rapid growth of an externally oriented economy in south-east China has transformed this region. Maritime China has always been a complex region, with many dialects and complicated overseas relationships. Over the past 25 years, the different segments of maritime China have grown together, increasingly constituting a single economic powerhouse. Investment from Hong Kong and Taiwan has built factories and new trading relationships. Of course, Taiwan and Hong Kong were traditionally parts of maritime China, but their close cultural, economic, and geographic ties with the other regions of maritime China were temporarily broken under Maoist China after 1949. As a result, those parts of Maritime China within the PRC's boundaries were surprisingly poor and backward at the end of the 1970s, and one of the first priorities of reformers after 1978 was to reestablish traditional economic links among parts of Maritime China. The early phases of China's economic opening after 1978 are largely the steps in the reconstitution of these traditional links.

Four special economic zones (SEZs) were set up in 1979–1980 to attract investors to China. Each SEZ strategically targeted a particular group of

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maritime Chinese as its primary source of investment. The largest SEZ, Shenzhen, was set up adjacent to Hong Kong to attract spillover investment from what was then still a British colony. The gradual dismantling of the barriers that separated Hong Kong from the rest of the Pearl River Delta has meant that multiple urban areas are progressively growing together, transforming the entire eastern delta into a single integrated economic region. Meanwhile, the Zhuhai SEZ was set up across the Pearl River, next door to the Portuguese colony of Macau. Up the coast, the Shantou SEZ was established near the Chaozhou (Teochiu) ethnic homeland to attract investment from this group, which is especially important economically in Southeast Asia. Finally, the Xiamen SEZ was designed to revive overseas links among the south Fujian (Minnan) people. People in Taiwan speak the same variety of Minnan that is spoken around Xiamen, from where most of them emigrated after the 1600s. The Minnan have long been an oceangoing, trading people, and the distinctive Minnan dialect of Chinese is spoken also in extensive commercial networks throughout southeast Asia, as well as in Taiwan and Fujian itself. As China opened up, investment from Taiwan increased dramatically, and Taiwan has begun to serve as one of the economic centers of the whole southeast region. Thus Taiwan and the Pearl River delta today serve as the dual cores of Maritime China.

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The remainder of China's population is spread across the relatively arid regions of the north and northwest. A northern plateau region—consisting of Shanxi, Shaanxi, Inner Mongolia, Gansu, and Ningxia—contains almost all of these people, amounting to 10% of China's population. These people farm 18% of China's arable land, but the land is arid and of poor quality. This region accounts for 8% of the crop output and only 6% of industry. The population in the plateau region is concentrated in a few fertile river valleys—the Wei River in Shaanxi around Xi'an, and the Fen Valley in Shanxi around Taiyuan. To the west of this plateau country, people live primarily in oases or isolated fertile valleys in the northwest or are nomadic herdspeople. As one ascends to the high plateau of Tibet and Qinghai, one finds vast stretches of virtually uninhabited land.

1.4 MINERAL RESOURCES

Overall, China is a land-scarce and labor-abundant economy. With 20% of the world's population, China occupies 7% of the world's land area. China's share of world mineral wealth is roughly proportional to its share of land area, such that mineral reserves per capita are typically half or less of world averages.

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Even reserves of coal, which China mines and burns in abundance, amount to only 11% of total verified world reserves. China has developed the world's fifth-largest petroleum industry, but verified reserves of petroleum and natural gas amount to 2.3% and 0.8% of the world total. There are, however, rich deposits of nonferrous minerals such as tin and copper, and especially tungsten and rare earth.

The distribution of mineral and energy resources in China is extremely uneven. Fossil fuels are predominantly in the north, which has 90% of the oil and 80% of the coal reserves. Hydroelectric potential is substantial, where there is water (the south) and relief (the west): 68% of the hydropower potential is in the Southwest macroregion. The rapidly growing southern coastal regions have virtually no energy resources. Geographic constraints, therefore, dictate that China must develop in a labor-intensive and, ultimately, knowledge-intensive path. Moreover, unrelenting environmental problems will make economic trade-offs more difficult and complex for the foreseeable future.

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1.5 CONCLUSION: REGIONAL DIFFERENTIATION

Since the beginning of China's market transition, economic growth has been much more robust in the coastal provinces than in inland provinces. To some extent this difference reflects catch-up growth on the part of the coastal regions. Arguably, all three of the Far South, Southeast Coast, and Lower Yangtze macroregions were held back during the planned economy period. These macroregions entered the reform era significantly underperforming their potential, and it is not surprising that they have since grown faster than the national averages. But after 25 years of rapid growth, these southern coastal regions are now both richer and faster growing than the rest of the country. Not surprisingly, the coast-inland gap has been widely recognized as a fundamental feature of the Chinese economy. In 1999 the Chinese government officially launched the Western Development Program to give preference to western and inland provinces in investment projects and other economic development policies.

By itself, however, the idea of a coast-inland gap is too simple to capture the complexities of China's economic geography. In the first place, there is a north-south gap in growth rates that is just as significant as the east-west gap: the south is growing much faster. Indeed, the Chinese government implicitly recognized the north-south gap when it rolled out the Northeast Revitalization Program in 2003, designed to help the Northeast restructure heavy

Continued.....



industries facing resource depletion, loss of customers, and the need for downsizing. More fundamentally, it is inevitable that the coastal regions will emerge as the dynamic center of China's economy. This observation is especially true given China's dramatic reengagement with world trade and the high degree of openness China has achieved (see Chapters 16 and 17). Ironically, during 2005 the Chinese government even began to extend preferences to central China. In a sense, then, whereas the coastal regions received preferential policies early in the reform era, from 1979 through 1999, today every region except the coast is the beneficiary of preferential policies. Each of these preferential policies is different, to be sure. But even put together, these regional development programs will not alter the fundamental shift that is occurring from China's traditional inward orientation to its new globalized and outward-looking economy. After all, the coastal provinces are not just a "strip" on the edge of China: 41% of the population lives in the coastal provinces. In a broader accounting, the five macroregions adjacent to the coast contain 59% of China's total population. It is reasonable to hope that the effects of economic growth along the coast will naturally diffuse to areas within a single macroregion.

Continued.....



By contrast, it may take a long time to ignite growth in the macroregions that are distant from the coast. In the far west, the half of the country west of the Aihui–Tengchong line contains only 6% of the total population, and these people are far from the spreading impact of coastal development. In fact, China’s greatest development challenges are not in the vast and empty far western regions. Instead, they are in the areas where a dense population pushes up against the limits of water and what the land can provide. The line that defines these limits is precisely the Aihui–Tengchong line, slicing through the middle of the country. In a broad belt, running through Inner Mongolia, Shaanxi, Gansu, Sichuan, Guizhou, and Yunnan, China’s most intractable problems of poverty are concentrated. It is in this belt that a huge population struggles to eke out a living from an ungenerous land. This is a belt of environmental degradation, including deforestation and soil erosion, and of especially severe economic challenges: environmental, social, and economic problems all come together in this region. Geographical conditions and the associated environmental challenges will continue to shape China’s developmental challenges and possibilities. The geographic endowment provides the foundation upon which economic and social development proceed and certainly cannot be escaped. But at the same time, that environment is continuously being rebuilt through ceaseless economic activity.

Continued.....





Figure 1.3

China's provinces. Includes provinces, autonomous regions, and municipalities with provincial rank. SAR, Special Administrative Region

Continued.....



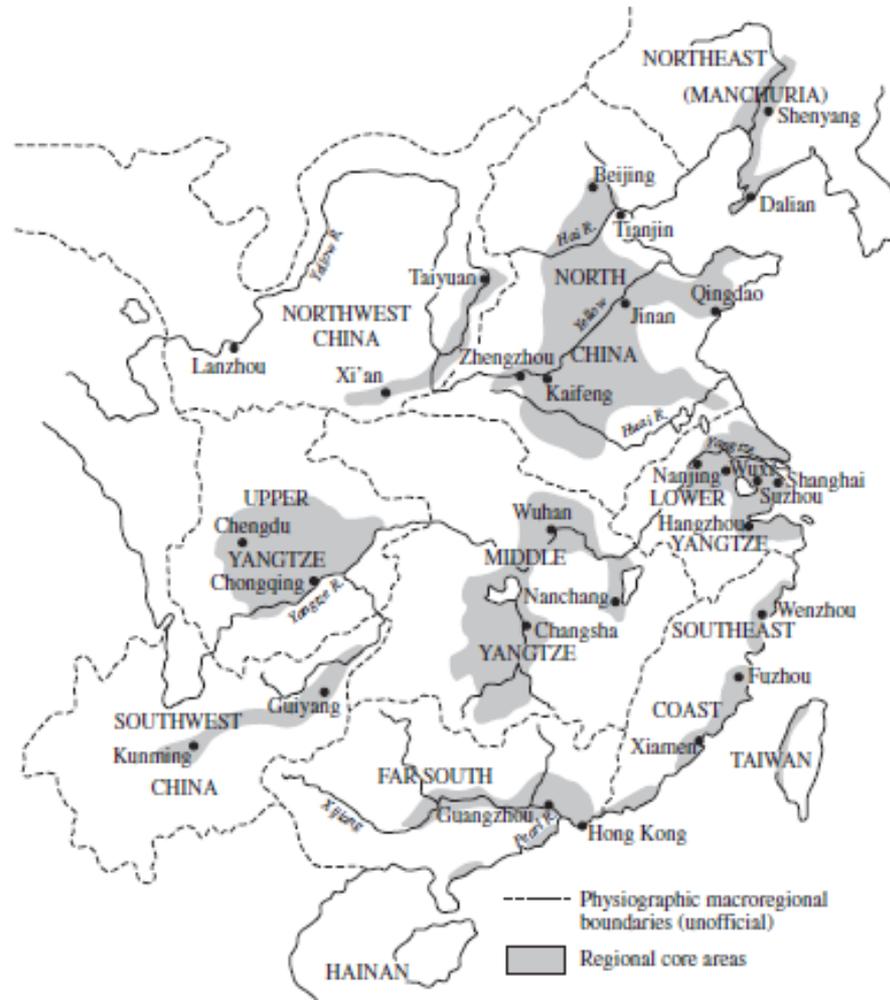


Figure 1.4
Macroregions and major cities of Eastern China



BIBLIOGRAPHY

Suggestions for Further Reading

Van Slyke (1988) is a lively introduction to Chinese geography through the perspective of the Yangtze River. Chi (1963 [1936]) is still an excellent account of different regions.

There are several excellent atlases of China now available in English, but perhaps the most beautiful is Institute of Geography (2000).

Sources for Data and Figures

Figure 1.1: Based on Sun Jingzhi (1988).

Figure 1.2: Based on Leeming (1984) and Institute of Geography (2000).

Figure 1.3: Based on Institute of Geography (2000).

Figure 1.4: Based on Fairbank and Goldman (1998).

Table 1.1: World Bank, World Development Indicators, <http://devdata.worldbank.org/dataonline>.

Data on Chinese landforms in this chapter come primarily from Zhao Ji (1990); with additional material from Zhao Songqiao (1994) and Li Ruluan (1984). CIA (1971, 52–53) has interesting maps that explicitly show the analogies between the United States and China.

The macroregion approach was created by Skinner (1977), though the map reproduced in Figure 1.4 is from Fairbank and Goldman (1998). Statistics on macroregions are drawn from Li Ruluan, updated from SYC.

Details on the links between specific groups of Chinese overseas and their source areas in China are given in Zhang Xianghan et al. (1990).

Coal and petroleum reserves come from British Petroleum. Chinese verified reserves of different minerals are in SYC 2005, 10–12.

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Part 3:

Presentation by Tatheer Sherazi at Raphah 3 days Course

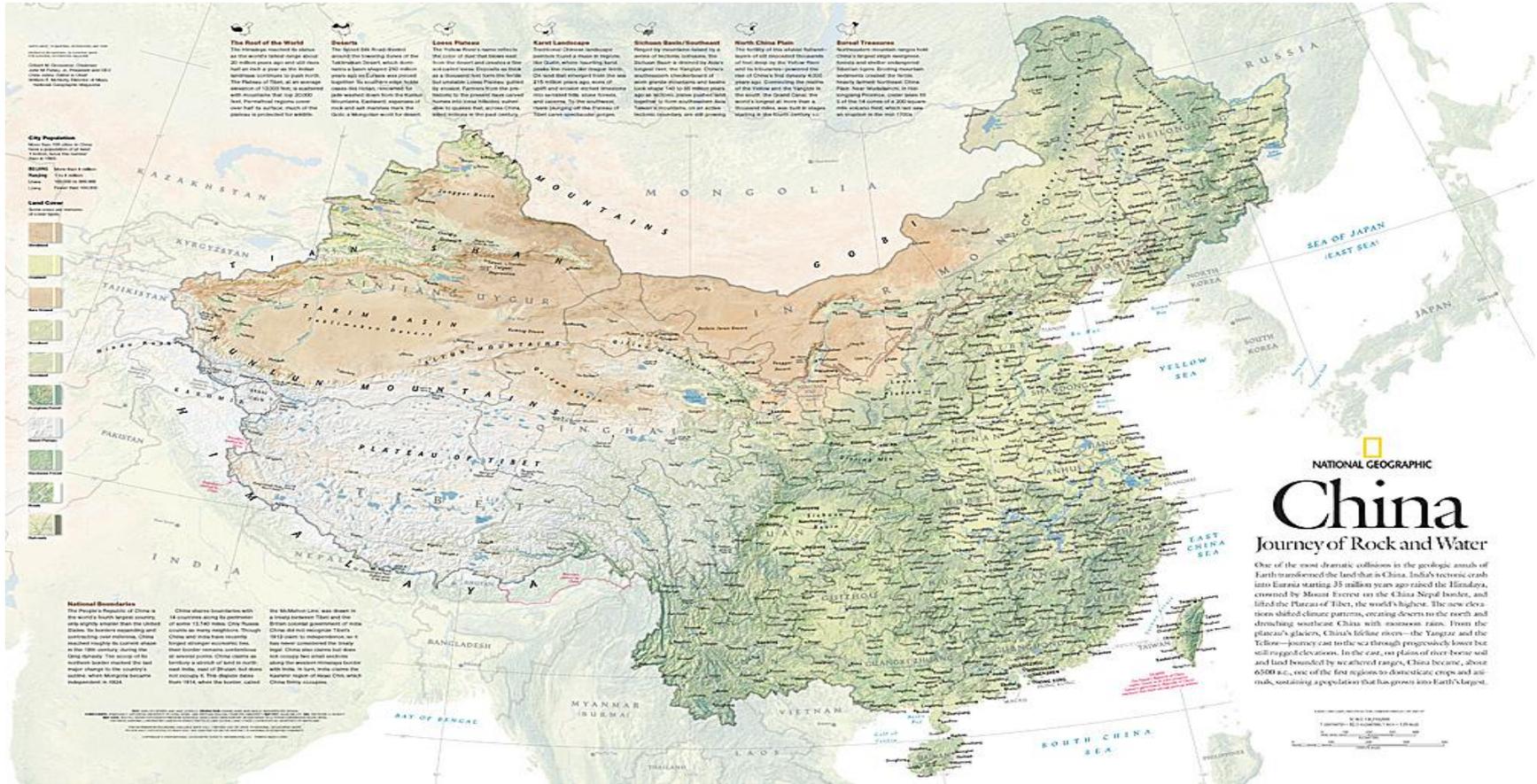


Geography of China

29/1/2018



National Geographic Map



NATIONAL GEOGRAPHIC
China
Journey of Rock and Water
One of the most dramatic collisions in the geologic annals of Earth's modern history is the land that is China. India's tectonic crash into Eurasia starting 35 million years ago raised the Himalayas, crowned by Mount Everest on the China-Nepal border, and lifted the Plateau of Tibet, the world's highest. The new elevated shielded climate patterns, forcing down to the north and drenching southeast China with monsoon rain. From the plateau's glaciers, China's lifeline rivers—the Yangtze and the Yellow—journey east to the sea through progressively lower but still rugged elevations. In the east, on plains of river-borne soil and land bounded by weathered ranges, China became, about 6500 B.C., one of the first regions to domesticate crops and animals, sustaining a population that has grown into Earth's largest.





COUNTRY PROFILE

Total Area: 9.5 million sq Kms (4th)

Total Population: 1.3 Billion (1st)

GDP :\$ 20.853 Trillion (2016 est)

GDP per Capita: \$ 15,095 (2016 est)



Political Geography

22,4,5,2,1

Provinces

Municipalities

Autonomous regions

Special Administrative Regions

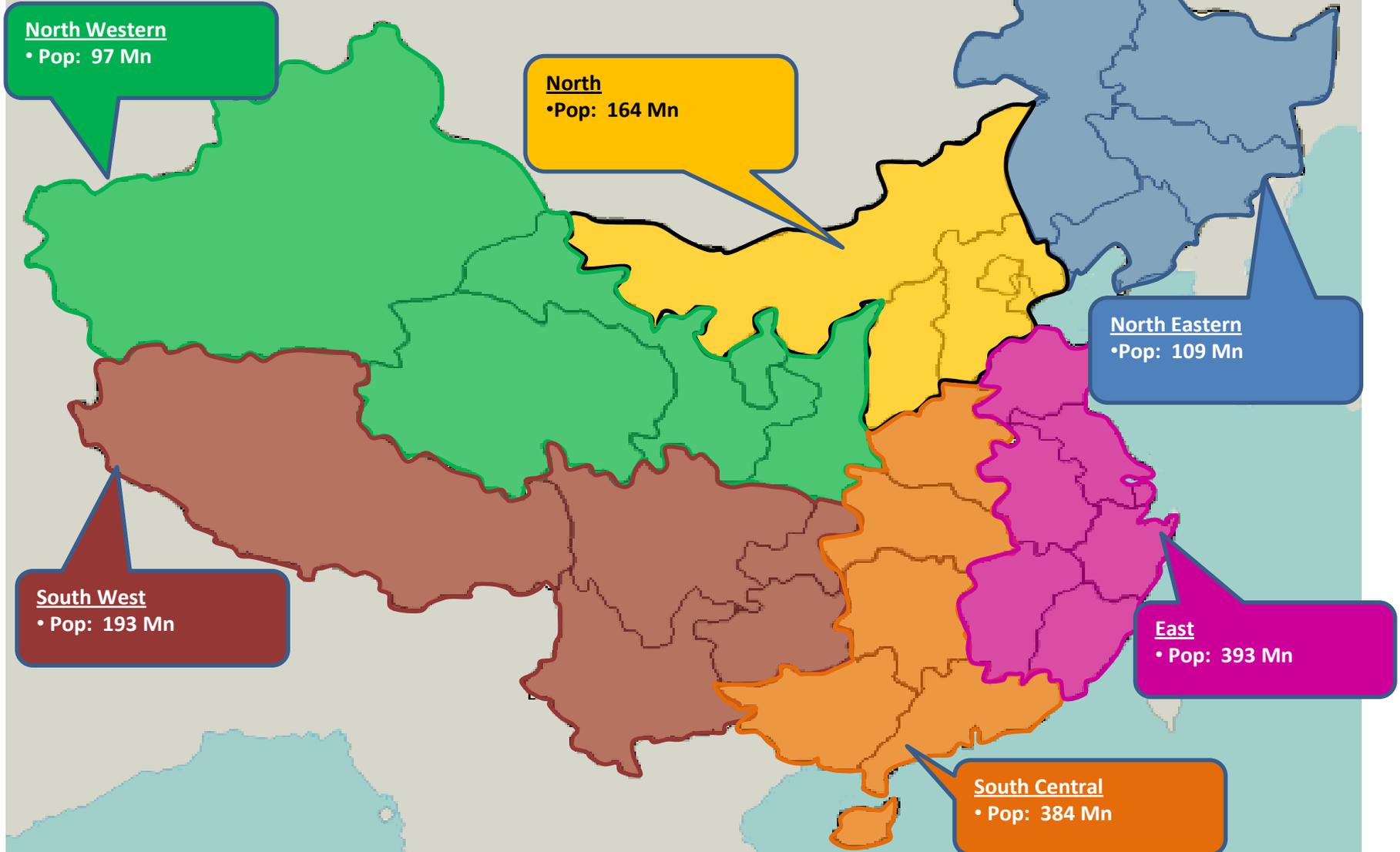




POPULATION MAP OF CHINA



ADMINISTRATIVE ZONES OF CHINA



North (5, 164 million)	Northeast (3, 109 million)	Northwest (5, 97 million)	East (7, 393 million)	South Central (7, 384 Million)	South West (5, 193 million)
<ol style="list-style-type: none"> 1. Beijing Municipality 2. Tianjin Municipality 3. Hebei 4. Shanxi 5. Inner Mongolia 	<ol style="list-style-type: none"> 1. Heilongjiang 2. Jilin 3. Liaoning 	<ol style="list-style-type: none"> 1. Shaanxi 2. Gansu 3. Qinghai 4. Ningxia Hui AR 5. Xinjiang AR 	<ol style="list-style-type: none"> 1. Shanghai 2. Jiangsu 3. Zhejiang 4. Anhui 5. Fujian 6. Jiangxi 7. Shandong 	<ol style="list-style-type: none"> 1. Henan 2. Hubei 3. Hunan 4. Guangdong 5. Hainan 6. Guangxi AR 7. Hong kong & Macau SAR 	<ol style="list-style-type: none"> 1. Chingqing 2. Sichuan 3. Guizhou 4. Yunnan 5. Tibet AR



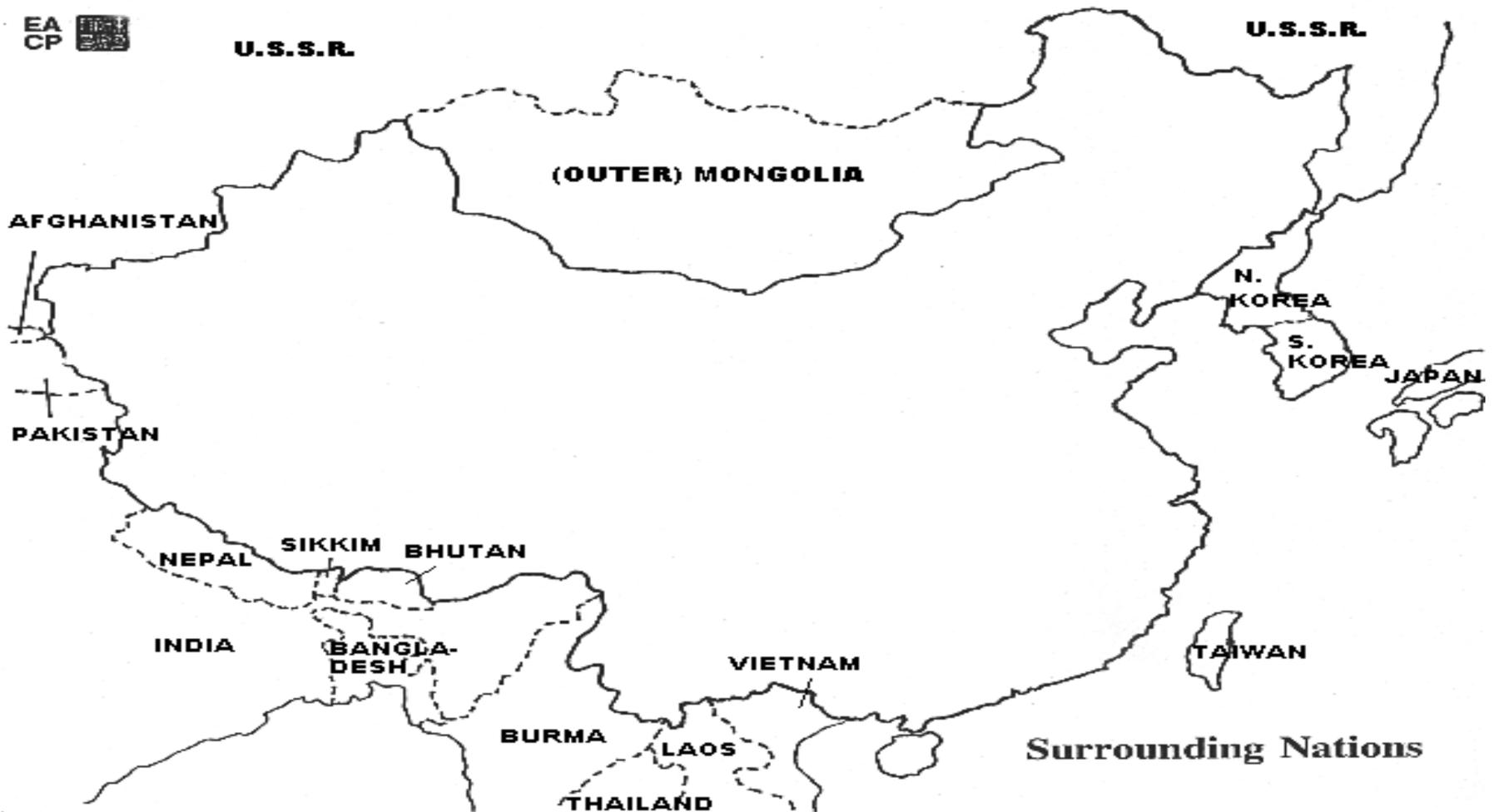
China and the World



China and the World



Surrounding Nations





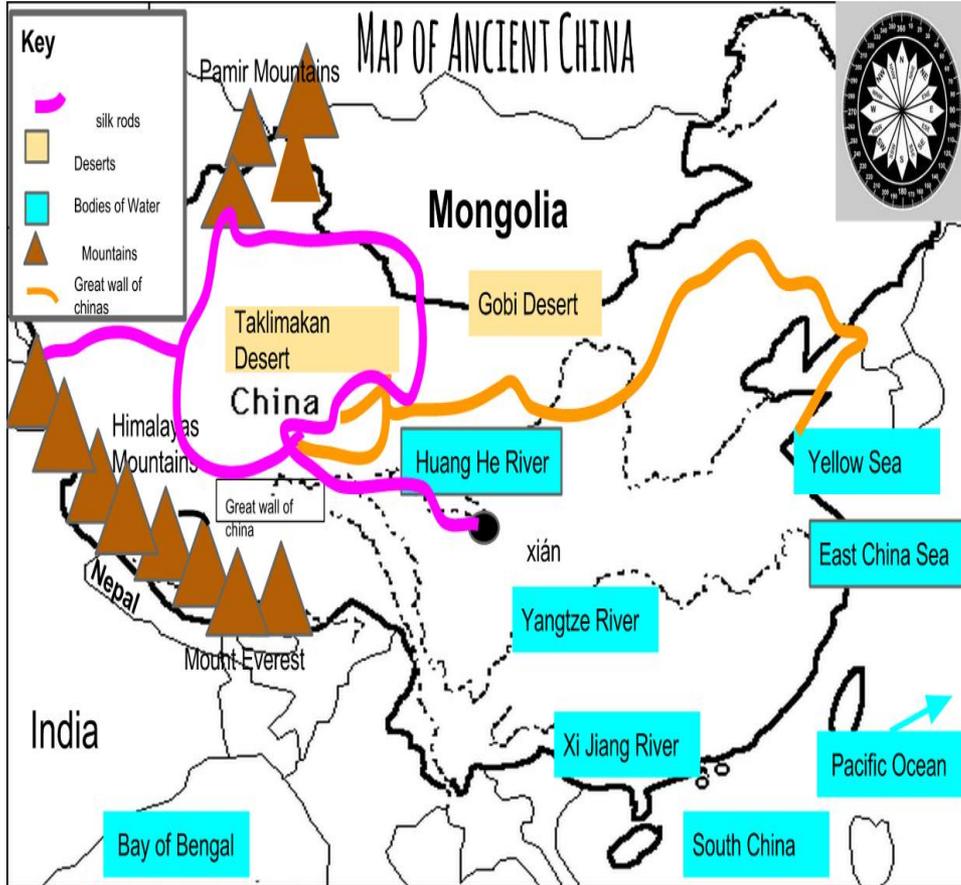
Major Rivers



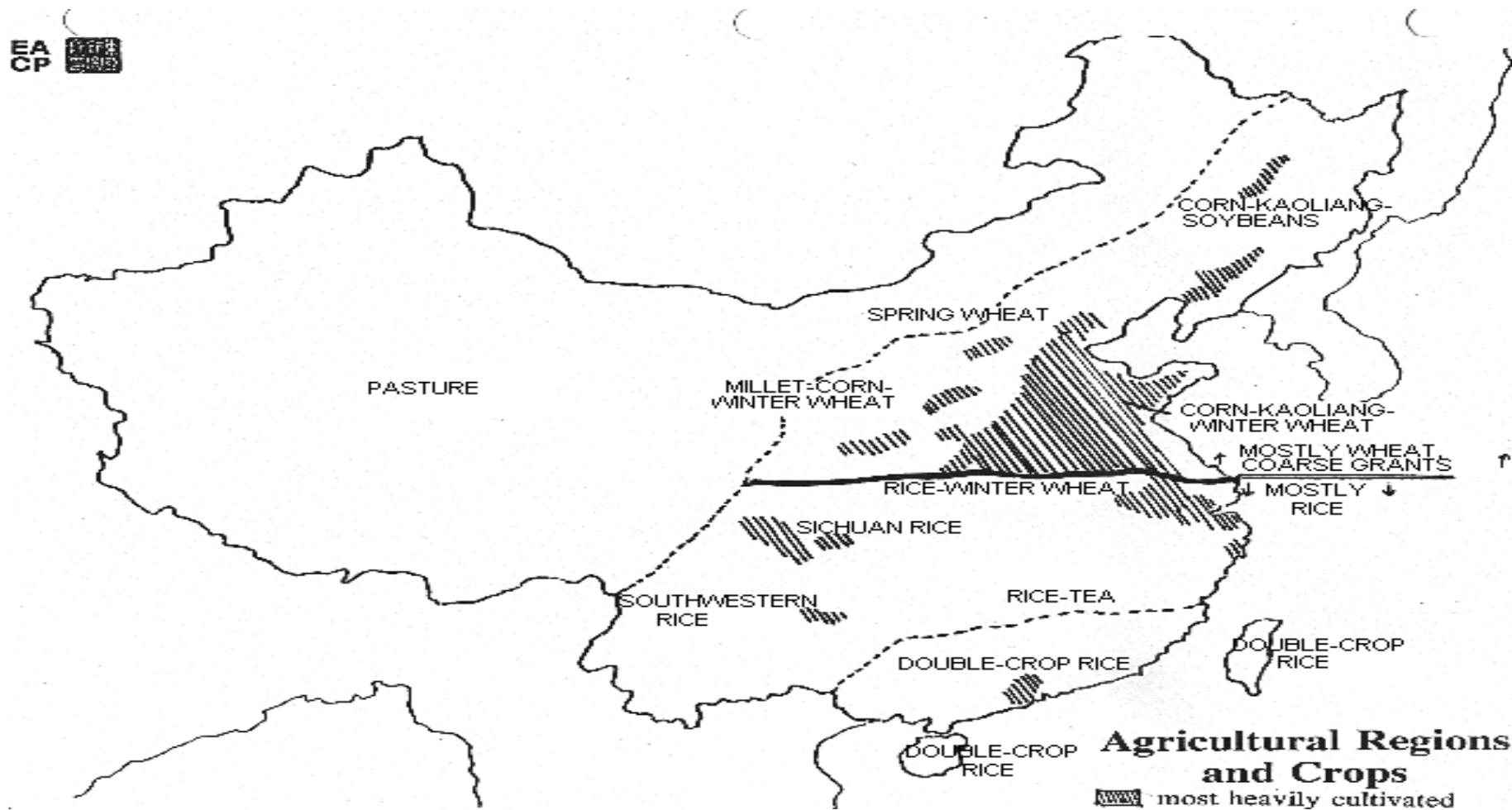


Mountains and Deserts

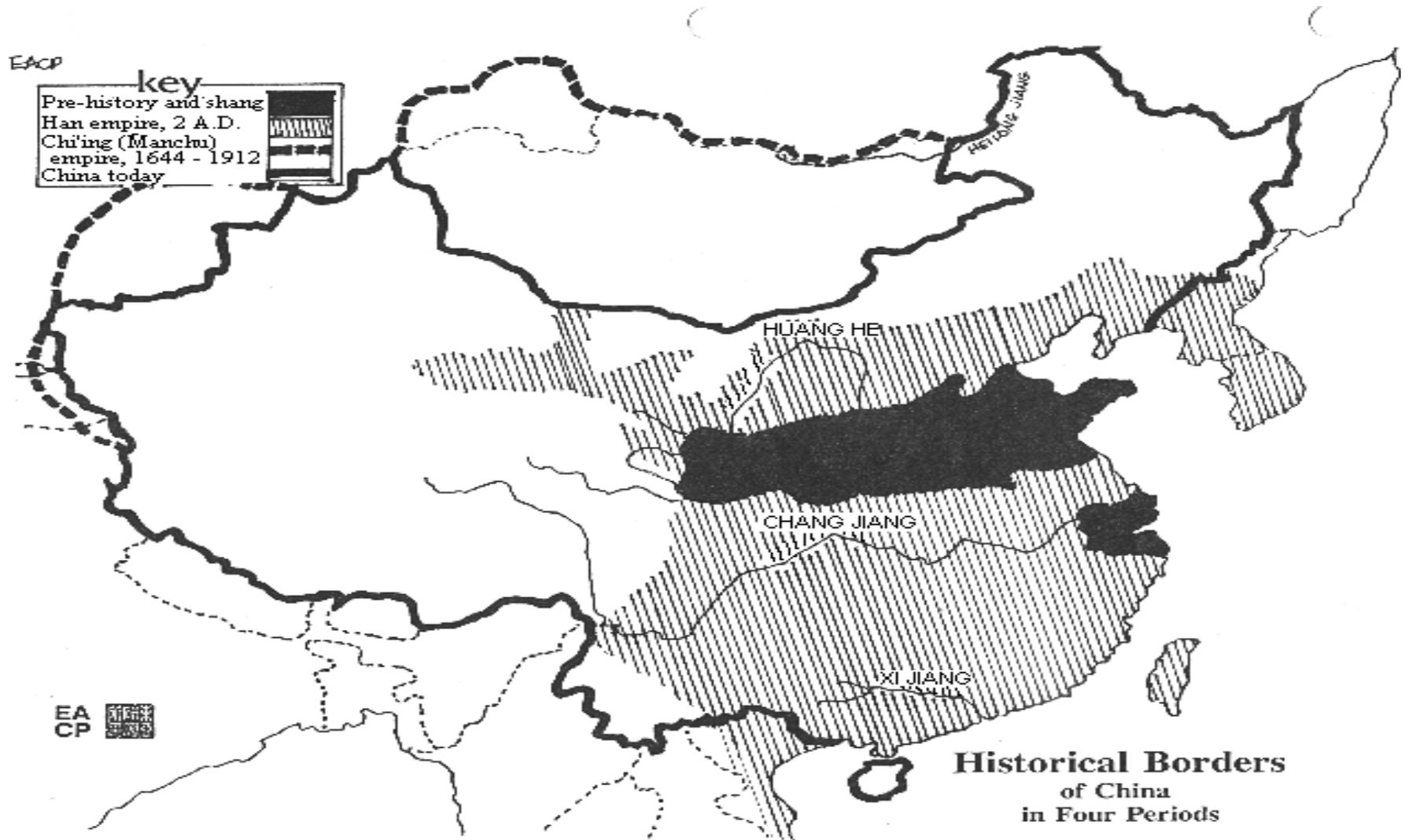




Agricultural Regions and Crops

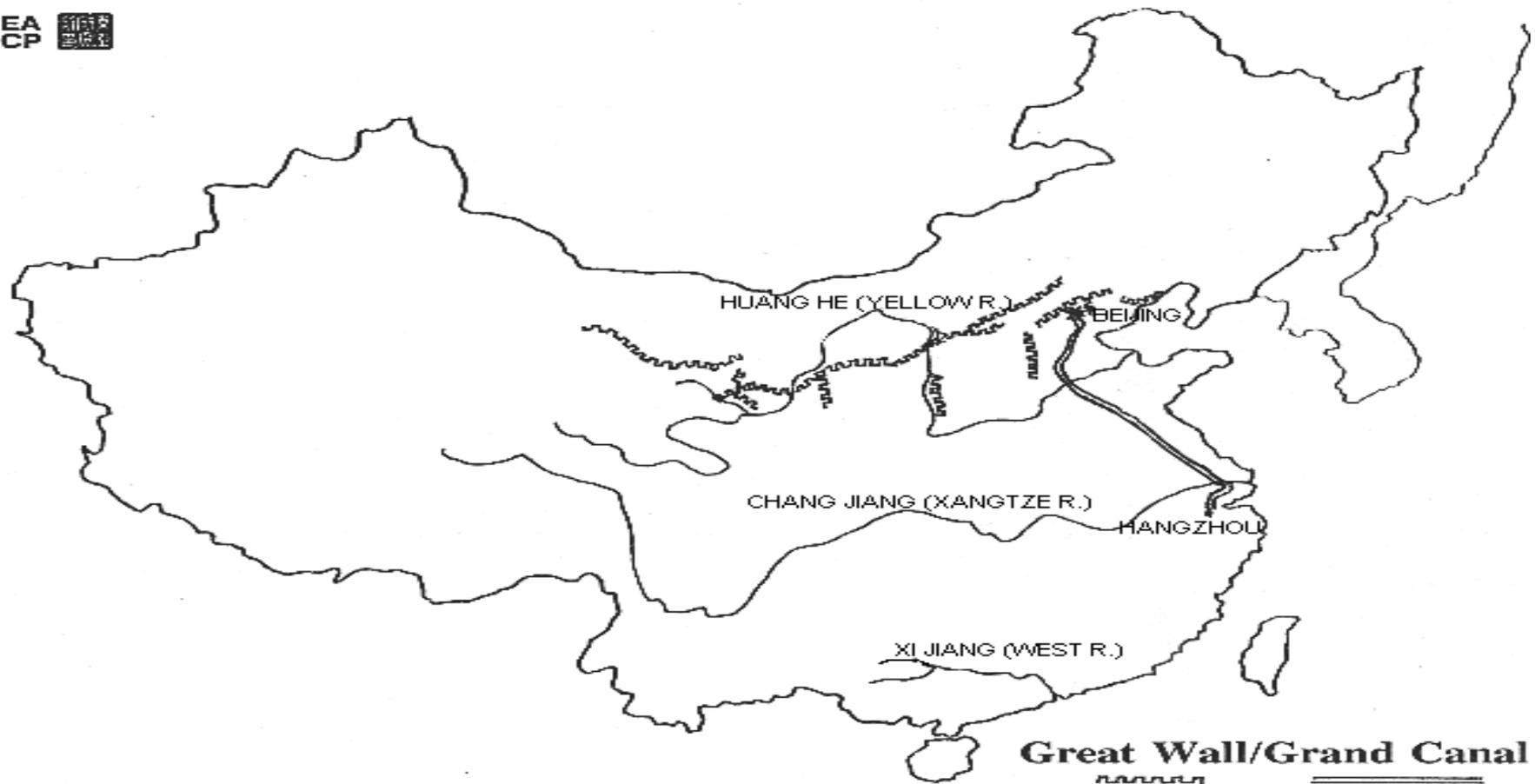


Historical Borders of China



Great Ancient developments of China: the Great wall and the Grand canal

EA
CP



Activity about Geography



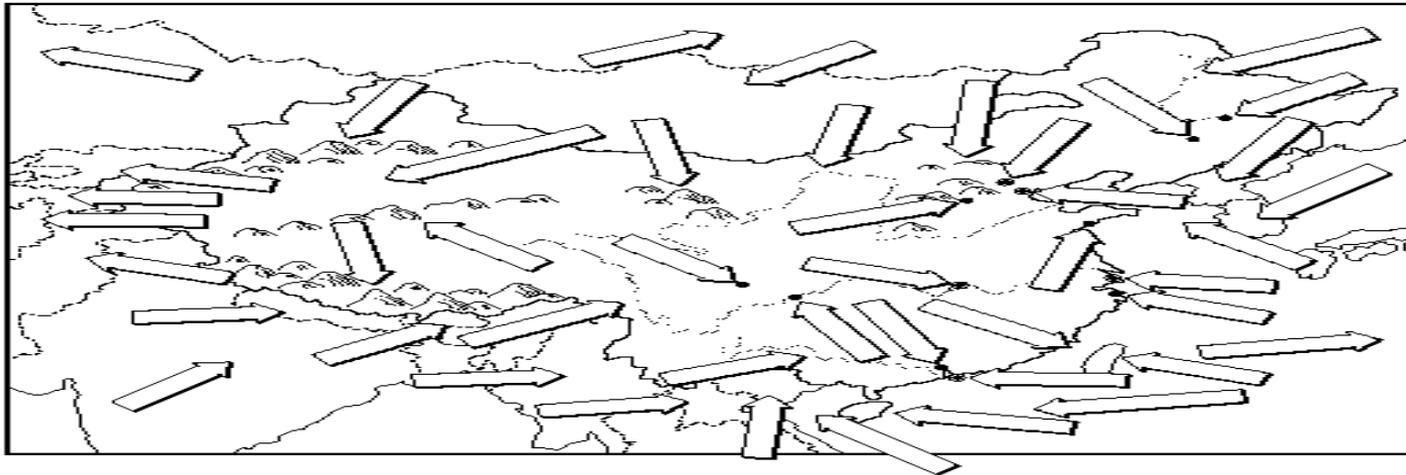
Geography of China

A Label-Me Map

Name: _____ Date: _____



Fill in the arrows with the names of the places they point to.



Chongqing Myanmar Zhu Jiang Tian Shan Huang He Shanghai Taiwan Altun Shan Tajikistan
South China Sea Gulf of Tonkin Taihang Shan Takla Makan Desert Yangtze River Songhua River
Hong Kong Guangzhou Qilian Shan Changchun Himalayas Yellow Sea Kyrgyzstan Kazakhstan
Pacific Ocean Shijiazhuang North Korea South Korea Hainan Island Taiwan Strait Afghanistan
Pakistan Wuhan Bhutan Beijing Russia Laos Mongolia Qingdao Vietnam Chengdu Ningbo
Harbin India Tianjin Nepal

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THANK YOU

