

Geography of China



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GEOGRAPHY OF CHINA

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Publisher's Note

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Some Basic Facts

THE People's Republic of China is situated in the eastern part of Asia, on the west coast of the Pacific Ocean. It borders on Korea in the east; the Soviet Union in the northeast, northwest and part of the west; Mongolia in the north; Afghanistan, Pakistan, India, Nepal, Sikkim, Bhutan in part of the west and the southwest; Burma, Laos and Viet Nam in the south. Across the sea to the east and southeast it faces Japan, the Philippines, Indonesia and others.

Besides wide territorial waters, China has vast land. The distance from east to west measures 5,000 kilometres, and from north to south over 5,500 kilometres. When the sun rises over the Wusuli River in the northeast, the Pamirs in the west are still dark. When blizzards wrap the north in winter, spring sowing is under way on Hainan Island in the south. The Tsengmu Reef, the southernmost part of China, is close to the equator and stays hot the year round.

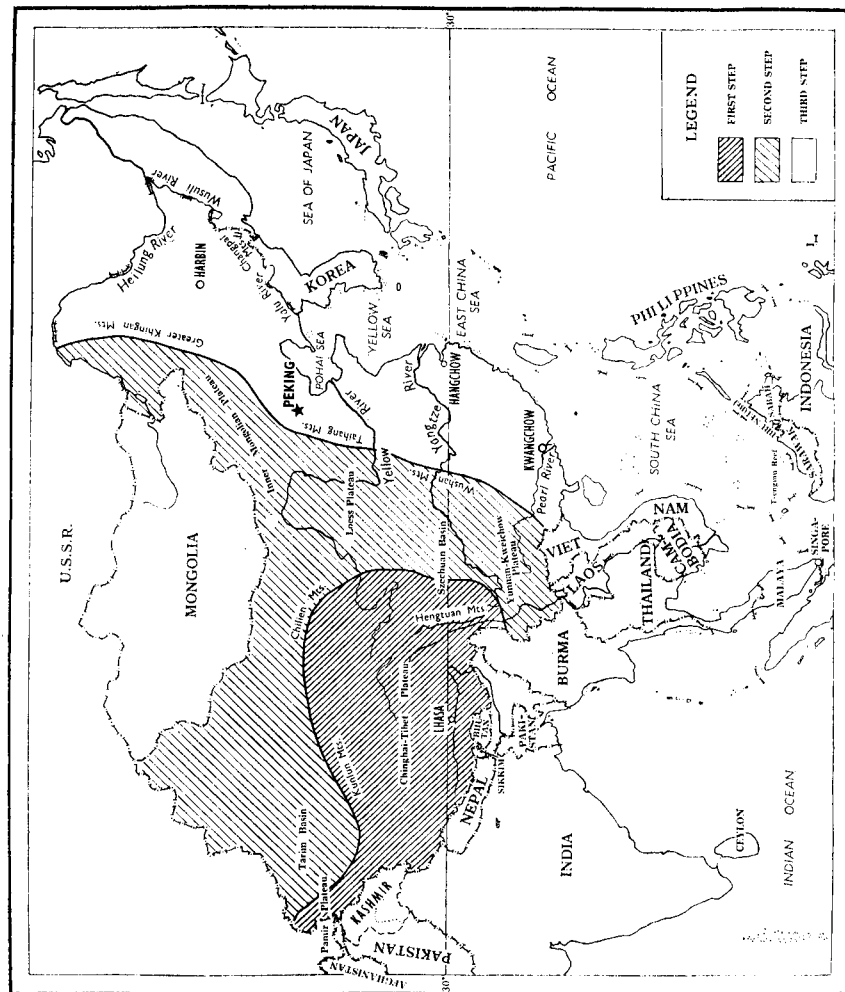
The topography varies from cloud-capped peaks to different shaped and sized basins, from wide, rolling plateaus to low, broad plains. There are great deserts and wilds in the northwest, while rivers, streams and lakes stud the plains on the middle and lower reaches of the Yangtze River. The basic topographic outline is a three-step west-east staircase. It begins with the Chinghai-Tibet Plateau 4,000 metres above the sea. Crossing the Kunlun and Chilien ranges on the plateau's northern edge and the Hengtuan Mountains on its eastern edge, the land slopes away to highlands and basins from 2,000 to 1,000 metres above the sea, then descends eastward to hilly regions and plains below 1,000 metres.

Most of the land lies in the north temperate zone with four distinct seasons. A combination of high temperatures and plentiful rain provides favourable conditions for farming. There are sub-tropical regions with luxuriant vegetation in all seasons. Some areas have long winters and short summers.

In the east, winter brings a dry, cold northwest wind from the hinterland toward the sea. Summer sees a hot, moist southeast wind from the sea. The northwest, being far from the seas, has comparatively little rain, its temperature varying greatly in one day. "Furs for morning and thin silk for noon" describes arid Sinkiang. On the other hand, the temperature on the Chinghai-Tibet Plateau in the southwest is relatively low because of its high altitude. Both Lhasa in the west and Hangchow in the east are at latitude 30° N., but July in Lhasa is 15° C. while in Hangchow it is 28° C.

Influenced by the monsoons, the temperature in the north and south varies greatly in winter but little in

CHINA'S TOPOGRAPHY



summer. In January the difference in the average temperature in Harbin in the northeast and Kwangchow (Canton) in the south is as much as 35° C. In July the difference is only 5° C. and swimming is done in both the Sunghua and the Pearl rivers. Raincoats are a must in the southeast but practically useless in most of the northwest.

China's water resources provide a great potential of hydro-power and water conservation from the Changpai Mountains in the northeast to the Hengtuan Mountains in the southwest. Though the northwest is dry, many glaciers and year-round snows on its high mountains provide favourable conditions for building irrigation works.

The Yangtze, one of China's main rivers, originates on the Chinghai-Tibet Plateau and flows eastward across the length of China through one autonomous region, eight provinces and one municipality into the East China Sea, a vital artery for transport and communications, a rich source for irrigation and hydro-power.

The east and south coasts lie along the Pohai, Yellow, East China and South China seas. The Pohai is China's inland sea, the others are connected with the Pacific Ocean. China has more than 5,000 offshore islands, the biggest being Taiwan and Hainan, long regarded as China's treasure islands for their abundant resources. Fine natural harbours are found along the 14,000-kilometre coastline from the mouth of the Yalu River on the China-Korea border to the mouth of the Peilun River on the China-Viet Nam border. These seas, islands and harbours are vital to China's national defence, contacts with other countries and the exploitation of marine resources.

China is rich in mineral resources, especially in quality iron, manganese, tungsten, antimony, tin, copper, lead, zinc, mercury, molybdenum and aluminum, coal and petroleum.

With a land 9.6 million square kilometres in area, the People's Republic of China is a unified, multi-national country of 700 million hard-working and courageous people. The Han nationality makes up 94 per cent of the population. The rest consists of more than 50 fraternal nationalities, including the Chuang, Hui, Uighur, Yi, Tibetan, Miao, Manchu, Mongolian, Puyi, Korean, Tung, Yao, Pai, Kazakh, Tai, Li, Kaoshan and others. The minority peoples are widely scattered, the more concentrated communities being in the northwest and southwest. Under the leadership of Chairman Mao and the Communist Party, the Chinese people of all nationalities are going all out to build socialism in their land.

Rich Natural Resources

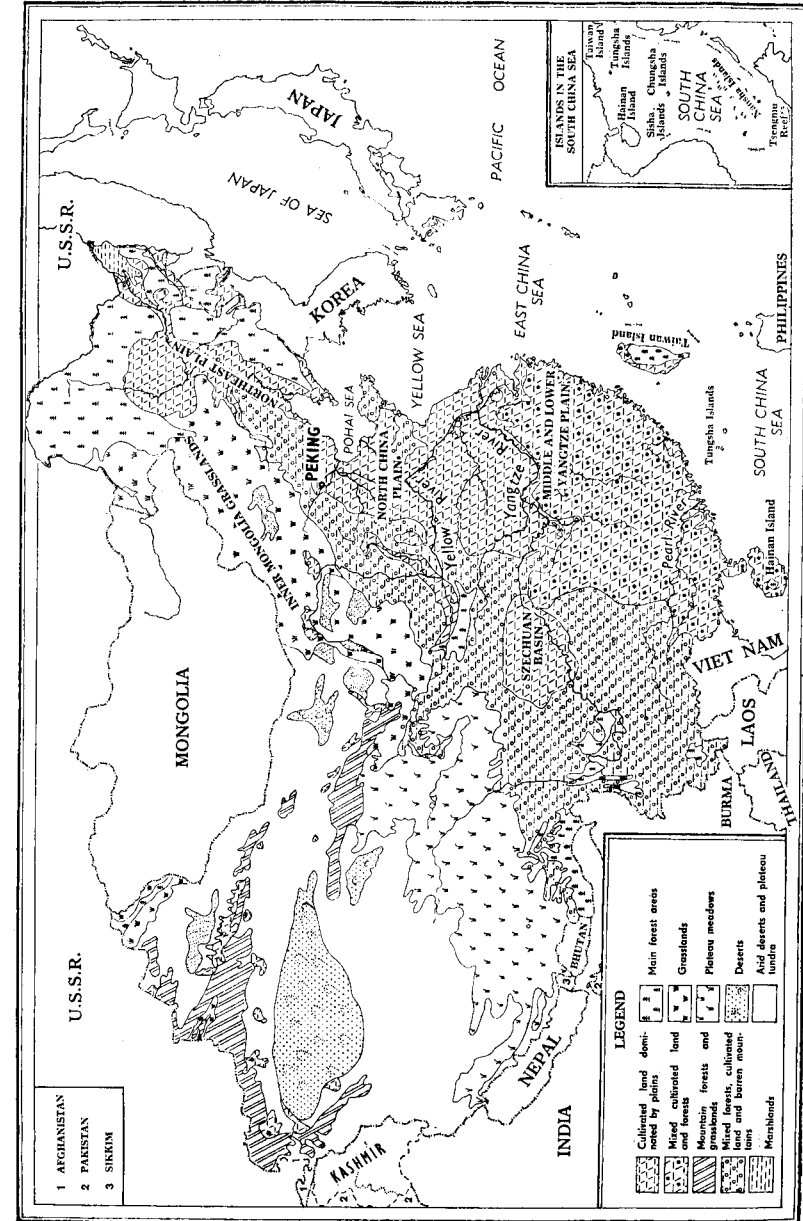
CHINA'S vast territory, extending 49 degrees in latitude and over 61 degrees in longitude, abounds in natural resources of all kinds.

● Land

The present 1,600 million *mu* (about 107 million hectares) of cropland is concentrated mostly in the plains, where the topsoil is thick and the climate suitable for cultivation. China's plains are distributed mainly in the eastern part of the country along the seacoast. In general, they do not rise more than 200 metres above the sea. The terrain rises and falls gently, their relative heights not more than 50 metres. China has three principal plains:

The Northeast Plain is situated between the Greater Khingan, Lesser Khingan and Changpai mountains. Its northern part is fertile black soil. The wide stretches of land yield one dry crop a year. Its main crops of *kao-*

MAP OF CHINA'S LAND RESOURCES



liang, spring wheat, soyabean, millet and rice make it one of China's important granaries. It leads the country in *kaoliang* and soyabean production.

The North China Plain extends to the southern foothills of the Yenshan Mountains in the north, the Taihang Mountains in the west and the Huai River in the south. The alluvial soil was formed mainly by the Yellow, Huai and Haiho rivers. It is China's largest and earliest cultivated area. The plain is mostly of brown soil, with saline-alkaline soil in the low-lying and coastal areas. This region's main products are winter wheat, maize and *kaoliang*. It is also rich in cotton, peanut, tobacco, sesame and other industrial crops. Most are dry crops grown three times every two years.

The Middle and Lower Yangtze Plain stretches from Ichang in the west to Shanghai in the east along the banks of the middle and lower Yangtze River. The alluvial soil deposited by the Yangtze is crisscrossed with numerous rivers and streams and studded with lakes. With fertile soil, easy irrigation and warm and humid climate, this plain is the nation's main producer of rice and has long been known as the "land of fish and rice". It also produces wheat, cotton, rape and silkworms.

There are many smaller plains along the southern seacoast, such as the Pearl River Delta and others. Frost-free the year round and with rich soil and plentiful rain, these plains yield two crops of rice a year and quantities of tropical and sub-tropical crops. Wheat and tubers are grown in winter.

Inland plains include the Fen-Wei Plain in the connecting valleys of Shansi's Fen River and Shensi's Wei

River, the Chengtu Plain in western Szechuan, the Yin-chuan Plain in Ningsia, the Houtao Plain in Inner Mongolia, and the oases in Sinkiang and western Kansu. Although small, their rich soil and irrigation make them important grain and industrial crop areas.

● Heat

China is rich in heat resources. On the Nansha Islands in the far south, the annual accumulated temperature of daily temperatures averaging 10° C. or above exceeds 10,000° C. This gives the region three crops a year. Even in the Heilung River valley in the northernmost part of the country, the accumulated temperature amounts to 1,500° C., facilitating the growth of spring wheat, potatoes and millet.

According to the degree of accumulated temperature, the land can be divided into five regions: (1) one-crop-a-year region (accumulated temperature 1,500° C. — 3,500° C.); (2) three-crops-in-two-years region (3,500° C. — 4,500° C.); (3) two-crops-a-year region (4,500° C. — 5,000° C.); (4) two-rice-crops-a-year region (5,000° C. — 6,000° C.) and (5) three-crops-a-year region (6,000° C. — 8,000° C.). Generally speaking, the one-crop-a-year region is north of the Great Wall. The Chinling Mountains — Huai River line, an important demarcation in Chinese geography, separates the three-crops-in-two-years region and the two-crops-a-year region.

The superior socialist system has enabled the working people to take measures to make full use of heat: building water conservation projects, selecting fine strains of seed, preventing the harm done by cold and pests, and

constant improvement of cultivation practices. Double cropping of rice, for example, has extended from south of the Yangtze to areas north of the river. The countryside surrounding Peking is moving from three crops in two years to two crops a year.

● Water

With tall mountains in the west and the terrain sloping to the east, the longer and bigger rivers flow east into the Pacific Ocean. The climate is strongly influenced by the monsoons. The summer monsoon, laden with moisture from the Pacific, brings plentiful rain.

As most of the main rivers originate in the highland mountains, their volume of flow is high. The annual total volume of flow of all the rivers is 2,700,000 million cubic metres, but the distribution is uneven, the south having more than the north. The Yangtze Basin leads in volume of flow, its annual runoff into the sea averaging 32,400 cubic metres per second. The Yangtze makes up 38.3 per cent of the country's total volume of flow; the rivers of the Pearl River valley and in Kwangtung Province, 17.7 per cent; the Yellow River, only 1.9 per cent. While the islands of Taiwan and Hainan make up only 0.71 per cent of the country's land area, their rivers make up 4.85 per cent of the total volume of flow.

Chairman Mao says, "**Water conservation is the life-blood of agriculture.**" The sharp drop of China's rivers from high mountains to plains and basins creates tremendous kinetic energy. There is a potential of 580 million kilowatts of hydro-power. Dams in the thousands built since liberation are contributing effectively to pre-

venting flood, generating power and providing irrigation. All the main rivers are navigable and the distances already charted total 160,000 kilometres.

● Forests

Plateaus and mountains make up 60 per cent of China's total area. There the vast forests, grasslands and rich deposits of mineral resources provide excellent conditions for developing industry.

Excessive felling and destruction by the reactionary ruling classes through the ages had depleted the forest resources which made up less than 10 per cent of the total land area at the time of liberation. After liberation the Communist Party instituted a policy of planned and rational felling, the combination of felling and planting and multiple-utilization, along with wide afforestation of barren hills and the planting of forest belts. The result has been increases in forest areas.

Most of China's forests are in the northeast, southwest, Fukien Province in the southeast and eastern Taiwan Province. The types are complex and there is a wide variety of trees. Of tall trees alone there are 2,800 kinds. Timber trees of fine quality and high economic value number close to 1,000, including the rare 66-metre-high Taiwanian, the red cypress with a trunk 21 metres in circumference, the metasequoia, the China cypress and the golden larch.

Rich timber reserves provide abundant materials for developing the construction, paper, textile, furniture, utensils and tools industries. Oils and essences are extracted from the roots, bark, leaves and blossoms. There

are also many valuable medicinal plants in the forest areas.

● Grasslands

Grasslands make up more than one-fifth of the total area. In Inner Mongolia grasslands make up 60 per cent of its total area. Others are found in Sinkiang, Chinghai and Tibet. The great variety of grass, lush and rich in nutrients, is a basic condition for stock-raising.

Fine breeds of stock are numerous. The famous Sanho horses bred in the northeastern part of Inner Mongolia are good for both riding and harnessing. The special breed of yak on the Chinghai-Tibetan Plateau have great stamina, are suited to the cold climate and rugged terrain. The Mongolian sheep of Inner Mongolia are rich in fat, the tail alone weighing 10 kilogrammes. The fine-wool sheep of Sinkiang provide high-quality wool and meat and have been widely promoted.

● Wildlife and Marine Products

The known wild animals in China number over 400. The meat, fur and skin of some are of high economic value. Others are valuable material for medicines. Giant Pandas and Golden Monkeys from the high mountain forests of the southwest are rare exhibits at the zoo. The wild horses of Inner Mongolia and Sinkiang, among the very small number still existing in the world, are of great value for scientific research.

The vast ocean fishing area provides a rich variety of marine products. Ocean fishing is fast developing, the

deep-sea fish accounting for two-thirds of the 1,500 kinds of fish. The most numerous fresh-water fish include carp, golden carp, silver carp, Chinese ide, bream and bighead. Out of the 20 million hectares of fresh-water surface, 6.7 million hectares can be used for raising fish.

southwestern provinces of Yunnan, Kweichow and Szechuan, and Hunan in south-central China, are the home of over 20 nationalities including Miao, Yi, Puyi, Tung, Pai, Tuchia, Hani and Tai. The Chuang, Yao, Li and She live mainly in Kwangsi, Kwangtung and Fukien in the south. The Kaoshan are spread throughout Taiwan Province.

● National Equality

Before liberation the people of China's minority nationalities, like the Han, were oppressed by the Kuomintang reactionaries in collaboration with imperialists. Led by Chairman Mao, the people of all nationalities united in the struggle to overthrow the reactionary rule of imperialism and the Kuomintang. The People's Republic of China was established on October 1, 1949. Since then the minority nationality areas have carried out democratic reforms, liberating the poor peasants, herdsman, serfs and slaves from their own class enemies, such as the three Tibetan overlords (the reactionary local government, nobles and lamaseries) and the reactionary Mongolian nobles, herd owners and reactionary religious leaders.

Following Chairman Mao's policy, all China's nationalities are completely equal. China opposes both Han chauvinism and local nationalism.

Regional autonomy is practised where the minority nationalities live in compact communities. There are five autonomous regions equivalent to provinces: Inner Mongolia, Ningsia (Hui), Sinkiang (Uighur), Tibet and Kwangsi (Chuang). In addition there are many auto-

nous *chou* and autonomous counties ("banners" in Mongolian areas). These autonomous areas are all inseparable parts of the People's Republic of China.

After scrapping the feudal system of exploitation and carrying out democratic reforms, the minority nationalities proceeded to organize mutual aid and co-operation both in agricultural and pastoral areas, setting up people's communes as in Han areas. They also carried out the socialist transformation of the ownership of the means of production in urban handicrafts and capitalist industry and commerce. Following this they have continued to carry the socialist revolution forward on the political and ideological fronts. Because of the rapid development of the revolution, Tibetans and Yi living in the Taliang and Hsiaoliang mountains of southwestern Szechuan were liberated from serfdom and slavery and skipped several centuries to enter into socialism.

In the course of revolutionary struggle and constant study of Marxism-Leninism-Mao Tsetung Thought, the people of all nationalities have raised their political level greatly and many advanced individuals have appeared. Many of these have joined the Communist Party. Some have been elected members or alternate members of Party committees at all levels right up to the Central Committee. The corps of minority nationality cadres is growing. Revolutionary committees at all levels and the National People's Congress have representatives of minority nationalities. United, the people of all nationalities manage affairs of state together. The Chinese People's Liberation Army also has an appreciable number of commanders and fighting men from the minority na-

tionalities. Shoulder to shoulder with the Han, they defend the motherland's borders.

● Great Change in Production

With the help of the state, the backward production of the minority nationality areas has changed tremendously, especially since the Cultural Revolution. Both sides of the Tarim River in southern Sinkiang used to be uninhabited alkaline land. With the development of irrigation works and the planting of protective forest belts, this land has been turned into excellent fields. Many new paddy fields yield 8.25 tons of rice per hectare.

Since carrying out democratic reforms in 1959, the Tibet Autonomous Region has reaped excellent harvests every year. Phari, lying among snowcapped Himalayan peaks at an altitude of 4,300 metres on China's southern border, has a mean annual temperature of 0.2° C. and a frost-free period of only one month. Under the feudal serf system, it was considered out of bounds for agriculture and never grew any grain. Now they plant large areas to *chingko* (a highland barley) and raise more than enough grain to meet their own needs.

The minority nationalities in Yunnan and Kweichow have abandoned their old slash-and-burn cultivation with primitive wooden plows and hoes and no fertilizer. They have developed a mass movement to turn slopes into terraced fields and ordinary fields into paddy fields. This has not only raised the productivity of the land but effectively controlled soil erosion, leading to a comprehensive development of agriculture, forestry and animal husbandry.

The people of various nationalities in some of the pastoral areas of Inner Mongolia, Chinghai and Sinkiang now live in permanent homes, ending several thousand years of nomadic existence. In accordance with local conditions they have started to farm, which also promotes animal husbandry. Every year the commune members work on projects to drill wells, dig canals and create wind-breaks. This has improved formerly deteriorating prairies and enlarged the pasturelands. Feed storage stations, stables, breeding stations and veterinary services have been set up. Herds have increased several fold since liberation, providing ever increasing supplies of animal products to the state.

The Olunchun are hunters who used to wander through the forests of Heilungkiang Province. Since liberation they too have settled down. They develop their hunting but they have also learned to farm, becoming more than self-sufficient in grain.

The industrial base in the minority nationality areas was very weak before liberation. Some places could not even produce a screw. Since liberation modern industry has gradually developed on a broad scale in all the autonomous regions and *chou*. Inner Mongolia's iron, steel and machine building, Ningsia's coal and Sinkiang's oil and textiles already occupy important places in China's economy.

Before liberation Tibet didn't have a single modern factory. Since then, and especially since the democratic reforms, the liberated serfs and slaves together with Han workers have overcome all kinds of difficulties to set up many different local industries. A hundred small and

medium factories and mines include coal, hydro-power, machine building and repair, chemicals, building materials, textiles, tanning and paper making. The ranks of the first generation of Tibetan workers already number in the thousands.

Many minority nationality areas have railways and a network of highways.

● Education and Health

Many minority nationality areas have universal primary education and some of them are making secondary education universal. All the autonomous regions and some of the autonomous *chou* have institutes of higher learning. Yenpien Korean Autonomous *Chou* in Kirin has set up a relatively comprehensive educational system from primary school to university. Education serves proletarian politics and is combined with productive labour. All nationalities are free to use their own language. In the past 10 years Chairman Mao's works, literature and textbooks have been translated into Mongolian, Tibetan, Uighur, Korean, Kazakh and other languages. Inner Mongolia, Sinkiang, Tibet and Yenpien in Kirin put out newspapers in the local languages. The minority nationality areas have broadcasts in their own languages.

In the old society there were no medical facilities in the minority nationality areas. Venereal diseases, bubonic plague, cholera and malaria were widespread. Those ill could only pray to the gods. The population of many nationalities dropped sharply with each passing year. Mongolians were a good example. In some of their areas

the infant mortality rate was as high as 98 per cent. After liberation medical institutions, health stations and anti-epidemic centres were established throughout the region, reversing this trend. During the Cultural Revolution, following Chairman Mao's instruction, "**In medical and health work, put the stress on the rural areas**", large numbers of medical personnel have gone to the countryside and pastoral areas to prevent and cure disease and run elementary medical training classes. The communes have set up co-operative medical services. This has greatly developed medical and health work in the national minority areas.

Coasts, Islands and Harbours

CHINA has a long and much-indented coastline, many islands and numerous fine harbours.

The seas along China's coast are the marginal seas of the western Pacific which lie between China and Korea, Japan's Kyushu and Ryukyu Islands in the east, and the Philippines and the island of Kalimantan in the south. They are the Pohai Sea, the Yellow Sea, the East China Sea and the South China Sea. The first three lie to the east of the Chinese mainland and the last to its south.

The Pohai is an inland sea stretching deep into the mainland of China. Almost completely enclosed by the Liaotung Peninsula on the north and the Shantung Peninsula on the south, it joins the Yellow Sea at the Pohai Straits. Scattered in the straits and controlling the passage are the Miaotao Islands. Peking, the capital of China, is situated west of the Pohai Sea.

The Yellow Sea, east of the Pohai Straits, extends from the mouth of the Yalu River in the north to a line running from the north bank of the mouth of the Yangtze to Korea's Cheju-do Island in the south.

The East China Sea is contiguous with the Yellow Sea in the north, and stretches southward to a line running from Cape Chenhai in Amoy Bay to the mouth of the Choshui River in Taiwan Province. It runs eastward to Japan's Kyushu and Ryukyu Islands.

The South China Sea touches Kwangtung, Fukien and Taiwan provinces in the north, with the line running from Cape Chenhai to the mouth of the Choshui River as a demarcation between it and the East China Sea, and extends south to the waters around Tsengmu Reef. Linked with the Pacific and Indian oceans by the Bashi Channel, the Sulu Sea, the Java Sea and the Straits of Malacca, it is a passage vital to China's transoceanic communications with countries in Asia, Oceania, Africa and Europe.

Of China's numerous islands, Taiwan is the biggest, with Hainan next in size. The islands, islets, reefs and beaches in the South China Sea are divided into four groups, namely, the Tungsha, Sisha, Chungsha and Nansha islands. Tsengmu Reef of the Nansha Islands at the southernmost tip of China is one of the larger ridges of sand in this sea. Largely formed of coral skeletons, these islands and reefs make colourful spots in the sapphire-blue tropical seas.

Like the land surface, the floors of the Pohai, Yellow and East China seas slope gently from northwest to southeast. Average depth of the Pohai Sea, which is the

shallowest, is about 20 metres, of the Yellow Sea 40 metres, of the East China Sea several hundred metres. The floors of these seas are extensions of China's eastern mainland submerged in the waters.

The Tiaoyu and other islands belonging to China are located in the East China Sea northeast of Taiwan. Between them and the Ryukyu Islands is a 2,000-metre deep trench.

The South China Sea is a relatively complete deep-sea basin. The average depth of its central part is 3,000 metres, with some areas exceeding 4,000 metres.

● Coasts

China's coast extends from the mouth of the Yalu River on the China-Korea border in the north to the mouth of the Peilun River on the China-Viet Nam border in the south, a 14,000-kilometre long arc with the south-east section projecting. Many islands also have long coastlines.

The coast may be roughly divided into two types, sandy and rocky. North of Hangchow Bay the coast is mainly silt-mud. The structure is simple and the beaches are generally smooth, good for opening salt fields which provide raw material for the chemical industry. This coastal area was formed by silt carried down by the Yellow, Haiho and other rivers to their mouths. The west coast of Pohai Bay is the most typical. The constant piling up of silt and mud and extension of the land

opens up broad prospects for reclaiming land for farming by building sea dykes.

South of Hangchow Bay, especially in Chekiang and Fukien provinces, the mountain ranges run along the coast and close to it. The continuous pounding of the waves against them have formed rocky cliffs indented with numerous inlets and big, deep harbours.

Rocky coasts are also found north of Hangchow Bay along the Shantung and Liaotung peninsulas and near the cities of Chinwangtao and Hulutao on the north shore of the Pohai Sea.

There are also mangrove coasts along Fukien and Kwangtung provinces, coral reef coasts along Taiwan and the South China Sea islands, and fault coasts on the east side of Taiwan.

● Harbours

Harbours are of two types, according to their location.

One kind is situated in the mouths of big rivers. The three biggest are the Tientsin Harbour on the lower reaches of the Haiho River west of Pohai Bay, the Shanghai Harbour at the mouth of the Yangtze where the Whangpoo and Woosung rivers merge, and the Whampo Harbour at Kwangchow in the Pearl River Delta where the Tungkiang, Peikiang and Sikiang rivers merge.

All three harbours are connected with the broad hinterland by rivers, railways, highways and airlines. The port of Shanghai serves the largest hinterland, which includes provinces of the Yangtze and Huai river valleys

and some of the southeast coastal provinces. It also leads in the volume of flow of goods. Tientsin's port serves north China, Inner Mongolia and parts of the northwest. It is a junction for exchange of goods between north and south and an important foreign trade port. Whampoa Harbour, serving all of south China, is a junction for water and land transport and the biggest foreign trade port in that region.

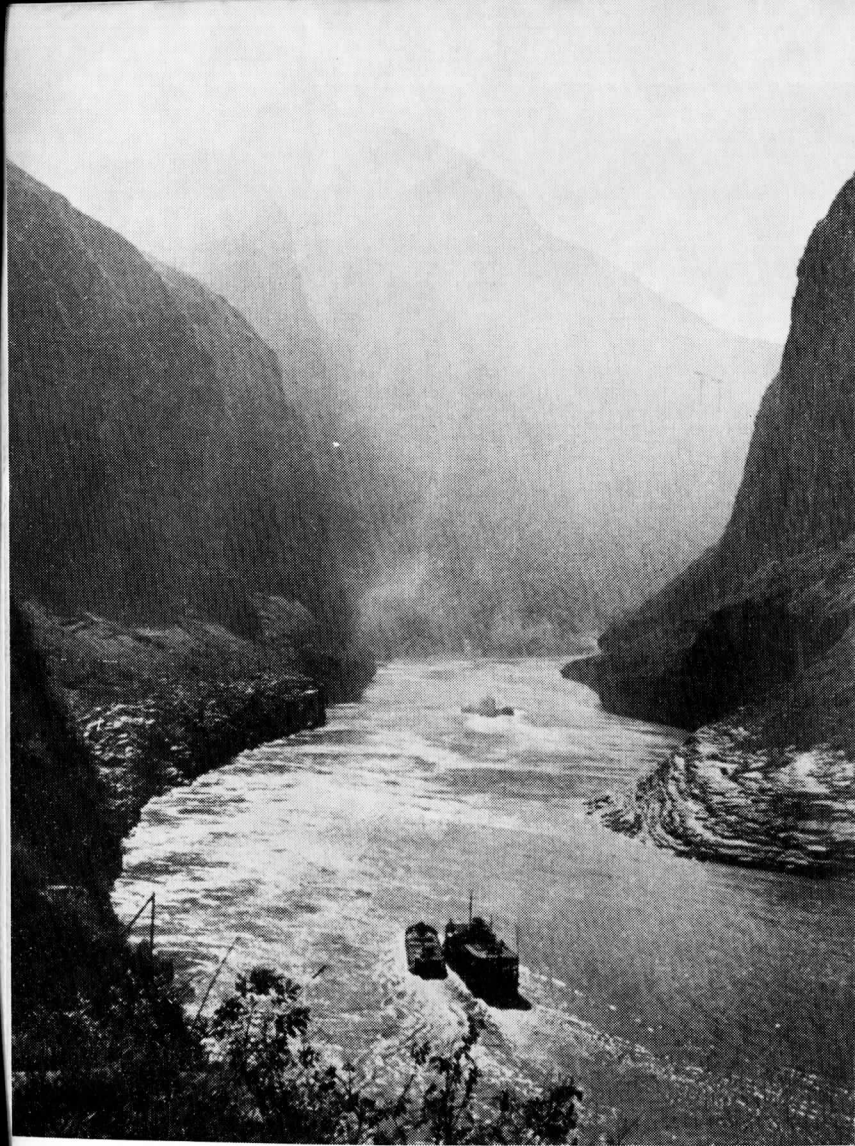
The second type is the natural harbours on the bays, such as at Talien on the Liaotung Peninsula, Tsingtao on the Shantung Peninsula, Keelung in Taiwan and Chankiang on the Leichow Peninsula. Their waters are wide and deep and sheltered by islands. Rail connections link them to the hinterland.

The Chinese working people have a long history of utilizing marine resources and developing ocean navigation. Salt fields and coastal fishing existed on a fairly large scale as early as 770 B.C. About 2,000 years ago the people began building ships and charting sea routes. By the early 12th century they were using the compass in navigation, and ocean shipping had reached the east coast of Africa. From 1405 to 1433 fleets of ships under China's famous navigator Cheng Ho (1371-1435) made seven voyages to regions west of the South China Sea and established friendly relations with over 30 countries in Asia and Africa.

In the middle of the 19th century, imperialist forces invaded China by sea. China's sea harbours came under the control of the British, American and Japanese imperialists and were used as siphons to suck the blood of the Chinese people. With the liberation in 1949, these



The Great Wall at Pataling, north of Peking



Through the Yangtze River Gorges

The Yangtze River Bridge at Nanking





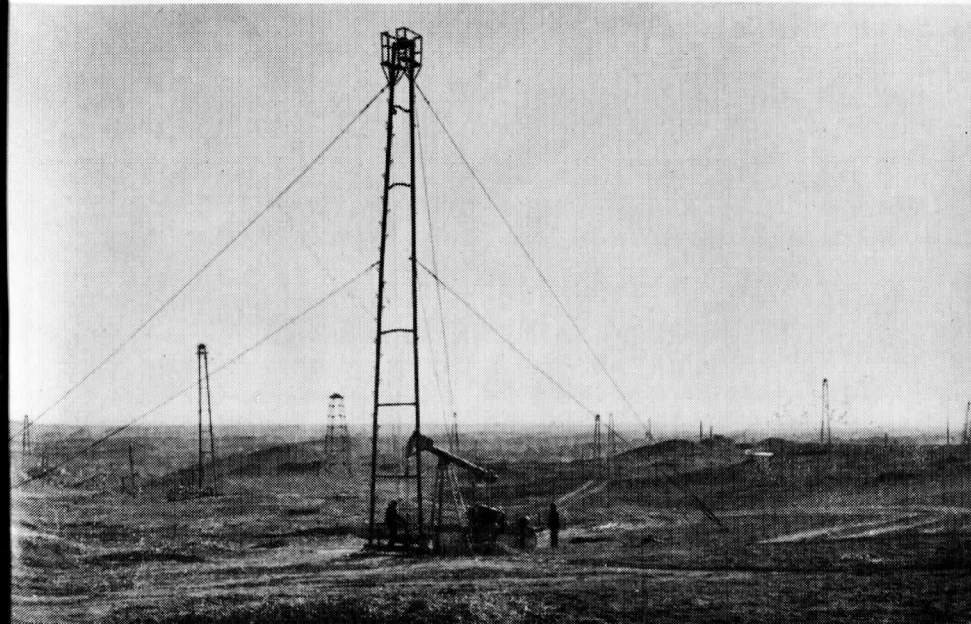
The city of Lhasa on the Chingbai-Tibet Plateau

Horses grazing on a Tienshan mountain plain



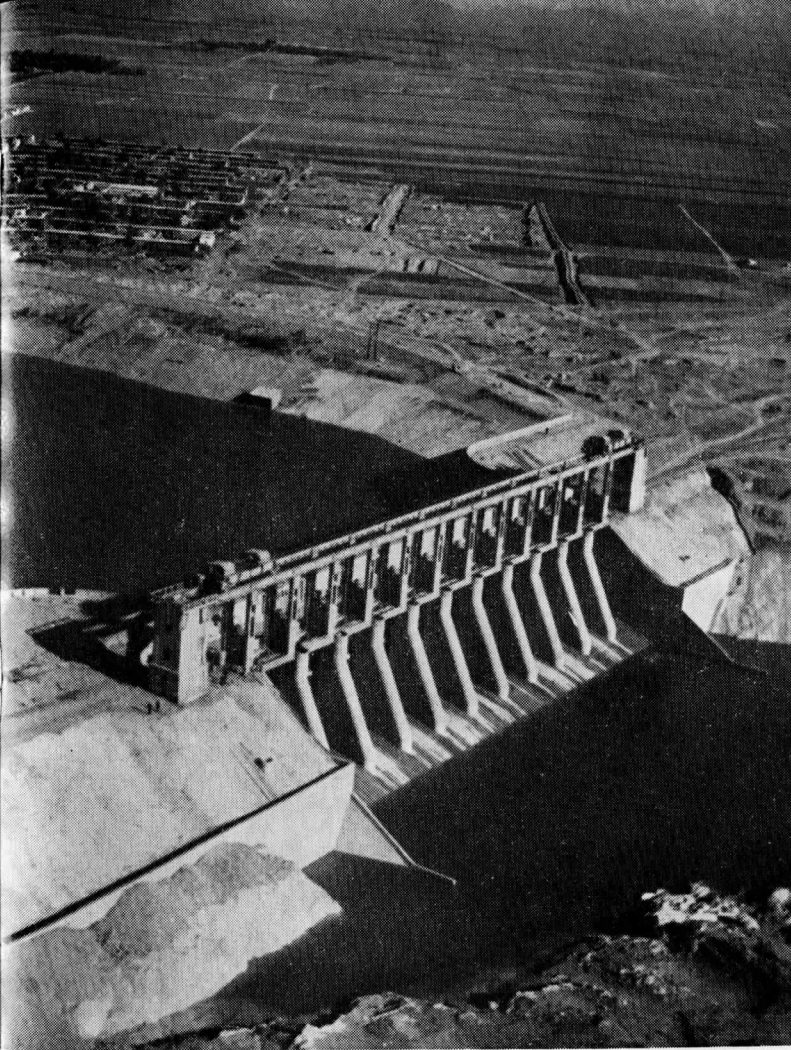
Prospecting team in the Kunlun Mountains

Construction in the Tsaidam Basin, Chingbai Province





Inner Mongolia grassland



Spillway on the Haibo River

*Terraced fields on
a loess plateau*

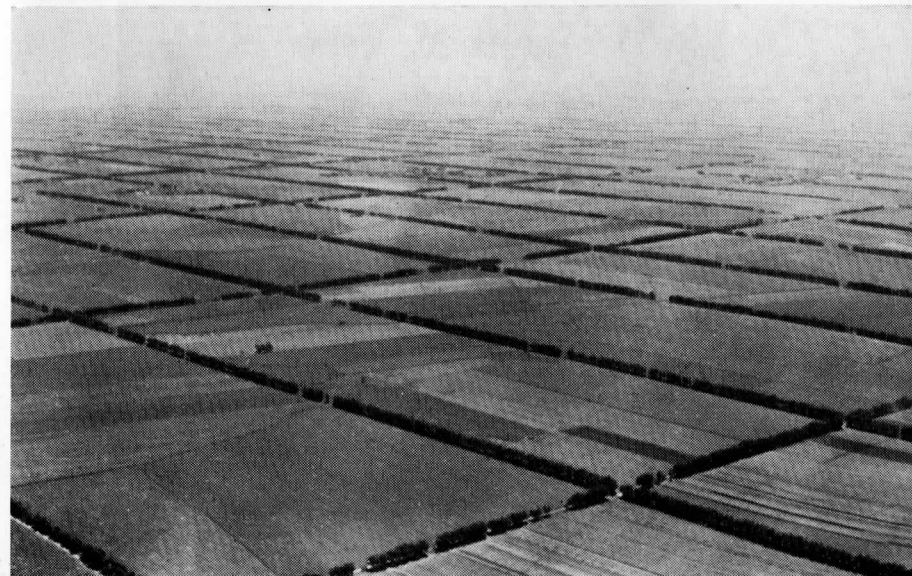
*River and canal network in
the Yangtze River Delta*

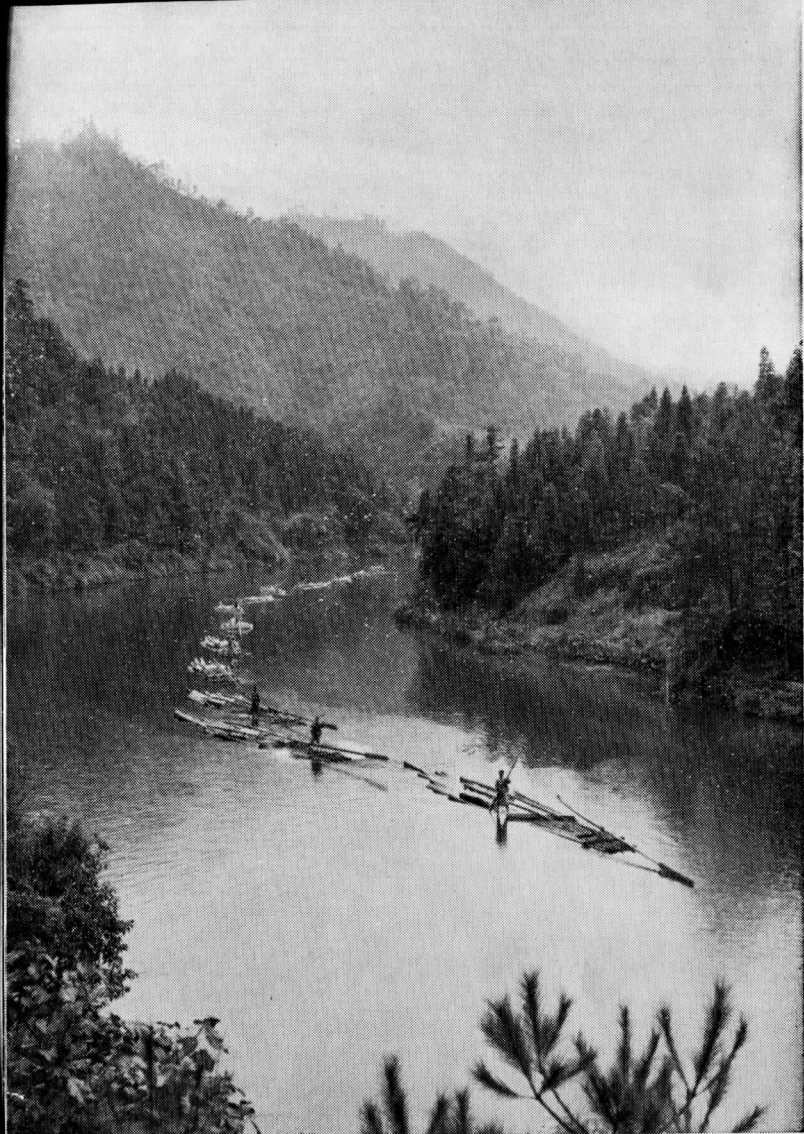


*Harvesting wheat on the
"Great Northern Wilder-
ness" of northeast China*



Tree shelters in Fuyu County beside the Sunghua River

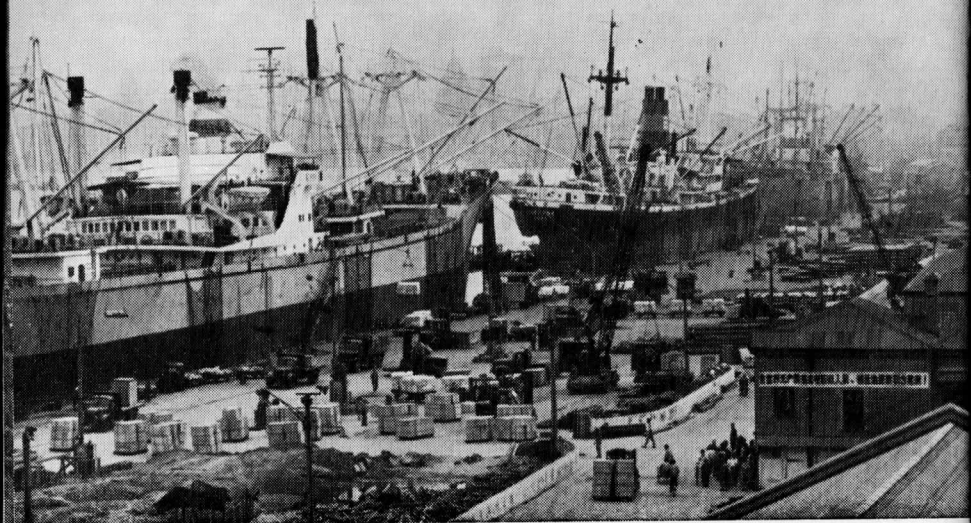




*Timber rafts floating downstream
in a south China forest area*



Banana harvesting in the Pearl River Delta



Wharf at the port of Shanghai

Mending nets. A tortoise-fishing team on the Sisba Islands, China's outpost on the South China Sea

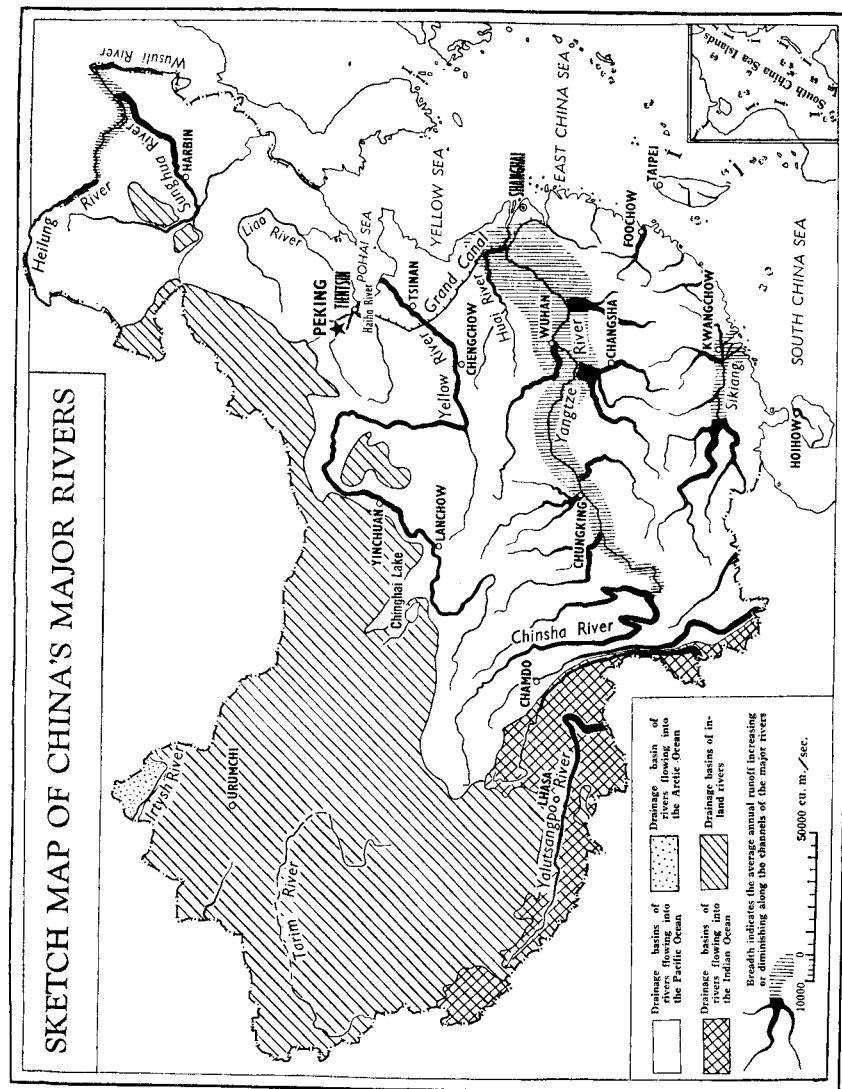


harbours were returned to the people. Since then the Chinese people under Chairman Mao and the Chinese Communist Party have renovated and expanded the principal harbours, reconstructed the Hsinking Harbour at Tangku and built the Chankiang Harbour which is of vital importance in foreign trade.

Rivers

CHINA has a particularly large number of rivers. More than 5,000 of them have drainage basins of over 100 square kilometres. The majority of these have outlets to the sea. All the major rivers—the Yangtze, the Yellow, the Heilung, the Pearl and the Haiho—flow from west to east and empty into the Pacific. The Yalutsangpo and Nukiang rivers in southwest China stream south into the Indian Ocean. The Irtysh River which flows through Sinkiang eventually finds its way to the Arctic Ocean.

The rivers in the northern part of China—that is, north of the Huai River and the Chinling Mountains—have a large flow in the summer which dwindles to something quite small in winter. They freeze in the winter, some for longer than others, and are therefore not navigable the year round. Most of these rivers carry large amounts of silt, so that often the lower course fills up to such an extent that the channels rise above the



level of the surrounding land. Unless contained by strong dykes, these rivers often flood over and shift their course.

Rivers south of the Huai-Chinling divide carry a heavy volume of water which does not vary much with the seasons. These never freeze, a factor which makes them a valuable transport asset. Because the areas they drain are rich in vegetation, these rivers carry little sediment.

The biggest rivers in the Hengtuan Mountains in southwest China such as the Nukiang and the Lantsang rise in the Chinghai-Tibet highlands and rush down between towering mountains and narrow gorges. Because of this, though they have an enormous flow and are ice-free, they are not navigable. However, they offer an unlimited potential for water power.

Inland rivers, which are located mainly in the arid northwest, drain one-third of the country's total area. Among them are the Tarim, the Tsaidam and the Shuleh. They are fed by glaciers and snow, and these determine the volume and length of their flow. They flow intermittently and frequently dry up.

In addition to natural rivers, China has many canals. The Grand Canal dug in ancient times stretches for 1,700 kilometres from Peking southward to Hangchow. Other outstanding examples are the spiderweb of canals in the Yangtze Delta, the canals which have been built to provide an outlet for the Haiho River and the new Red Flag Canal for irrigation built through the mountains of Honan Province.

● Major Rivers

China's biggest river is the Yangtze. Rising in the Kokoshili Mountains in western Chinghai Province, it traverses 5,800 kilometres through Chinghai, Tibet, Yunnan, Szechuan, Hupeh, Hunan, Kiangsi, Anhwei, Kiangsu and the Shanghai area to empty into the East China Sea. It drains a basin of 1,800,000 square kilometres — about 19 per cent of the country's total area — inhabited by 250 million people. As the greater part of its length is navigable, it is a major transport artery.

The Yellow River is the second biggest. Originating in the northern foothills of the Bayan Kara Mountains in Chinghai Province, it flows 4,800 kilometres through Chinghai, Szechuan, Kansu, Ningsia, Inner Mongolia, Shensi, Shansi, Honan and Shantung to empty into the Pohai Sea. The Yellow River valley, 740,000 square kilometres in area, is the birthplace of Chinese history and the cradle of Chinese culture.

The middle section of the Heilung River forms part of the border between China and the Soviet Union. This river has two sources, the Shilka River which originates at the eastern foothills of the Kentai Mountain in the northern part of the People's Republic of Mongolia, and the Erhkuna River which has three tributaries, one of which originates on the western slopes of the Greater Khingan Mountains in Heilungkiang Province. After the two tributaries merge at Loku Village west of Moho, the stream is called the Heilung River. Eventually flowing into the Sea of Okhotsk off the Soviet Union, it measures 2,850 kilometres in length from Loku Village to the outlet.

What is generally known as the Pearl River, south China's biggest, is really three rivers, the Sikiang, Peikiang and Tungkiang which converge near the sea in the Pearl River Delta. The Sikiang, largest of the three, rises in the Wumeng Mountains in east Yunnan and flows 2,100 kilometres through Kweichow, Kwangsi and Kwangtung into the South China Sea. The Pearl River drains an area of 420,000 square kilometres in China and a small basin in the Democratic Republic of Viet Nam. Located in humid sub-tropical regions with heavy rainfall, it carries an enormous flow, which, through the area's dense network of waterways, facilitates transport.

The Haiho is the outlet for five big waterways — the North Grand Canal, the Yungting River, the Taching River, the Tzuya River and the South Grand Canal. They converge like the ribs of a fan near Tientsin, and the 70-kilometre-long stretch from there to the Pohai Sea at Takukou is called the Haiho. The Haiho system drains an area of 265,000 square kilometres which includes the greater part of Hopei Province, part of Shansi and Honan provinces and the Peking and Tientsin areas.

The Huai River, 1,000 kilometres long, originates in the Tungpo Mountains in Honan Province and flows eastward through Honan, Anhwei and Kiangsu into the Hungtse Lake and eventually into the Yangtze. The drainage basin of the Huai, Yi, Shu and Szushui rivers, 260,000 square kilometres in all and situated in the heart of China, is the home of 100 million people. Within it lie 13 million hectares of cultivated land and rich natural resources.

● Controlling the Rivers

The reactionary ruling class in old China paid no attention to water control, so that almost all the main rivers perennially suffered from flood and waterlogging in their middle and lower reaches. Since liberation in 1949 the people have built more than 1,000 large and medium-size reservoirs and tens of thousands of small ones upstream on the bigger rivers, accomplished extensive soil conservation work and built several hundred thousand kilometres of dykes in the middle and lower reaches, and constructed 100 drainage channels in the low-lying plains and coastal areas.

One of the major flood control projects on the Yangtze is the Ching River Flood Diversion Area. After rolling through the gorges on the border of Szechuan and Hupeh provinces, the Yangtze enters the wide open plain. This middle section of the Yangtze is known as the Ching River and follows a narrow winding course. Slowed down, the current deposits its silt along this stretch, thus raising the riverbed above the surrounding land so that the water often flooded the banks.

After liberation, with leadership from the People's Government, a vast army of peasants numbering in the hundreds of thousands raised and strengthened 180 kilometres of dykes along this section. These dykes have never once breached in more than 20 years.

The flood diversion project was completed in a little more than a year following Chairman Mao's call in 1952, **"Strive for the successful completion of the Ching River flood diversion project in the interests of the people!"**

When the Yangtze rises in flood, it diverts the water safely into the detention basin through 54 sluice-gates.

The Yellow River used to be called "China's sorrow". The loess highlands through which its middle section flows have sparse vegetation, so that the soil is easily washed away. The silt carried into the Yellow River makes it the colour of mud. This silt is deposited in the riverbed as the current slows down while crossing the North China Plain. Before the liberation the river repeatedly burst its banks and changed its course. The untold misery which this brought to the people living in the river's flood plain was augmented by harm caused by the ruling classes through the ages. The most shocking example of this took place in 1938 at Huayuankou near Kaifeng in Honan Province. As the Japanese army invaded the plain, Chiang Kai-shek, head of the Kuomintang reactionaries, instead of fighting the Japanese, chose to slow their advance by bombing the dykes and bringing disaster to 10 million people in the area.

Very soon after the People's Government was established in 1949, Chairman Mao issued the directive that "**work on the Yellow River must be done well**". In the past 22 years the people have built several big reservoirs on the upper and middle reaches which serve power generation, irrigation, flood control and silt retardation. In the loess highlands extensive soil conservation projects have been undertaken to halt erosion. The 1,800-kilometre dyke on the lower reaches has been strengthened, and many water control projects have been built such as the People's Victory Canal on the north bank near Chengchow in Honan Province, which diverts some of the water for irrigation. To turn the silt to good use,

efforts have been made to let it collect to build new fields. Much has been done to improve alkaline soil in areas subject to waterlogging, develop irrigation and create fields which give high and stable yields. While the flood problem is basically under control, the battle to control silt is still going on.

The Haiho River system is like a palm-leaf fan. The five big rivers in the upper reaches and their numerous tributaries are all short and swift-flowing. During heavy rains, their torrents pour into the Haiho at high velocity. Unable to take the increased flow, the river used to burst through to the plain in great floods.

In 1963 Chairman Mao issued the call, "**The Haiho River must be brought under permanent control.**" Since then the people have dug or widened over 20 large outlets for the river, totalling 2,000 kilometres in length. This increases the river's carrying-capacity nine fold. They also erected 14 dykes totalling 1,400 kilometres, built or enlarged 1,400 reservoirs in the mountain areas with a total capacity of 17,500 million cubic metres. Constructing these projects entailed moving 1,500 million cubic metres of earth. With the river basically under control, there have been constant good harvests on the three million hectares of farmland in its valley.

The Huai River was also known for its floods. Chairman Mao's call in 1951 that "**the Huai River must be harnessed**" opened a campaign in which the people dug more than 30 big reservoirs and 2,000 smaller ones and built many storage projects. The course of the river has been reconstructed and several new outlets to the sea were dug, including the New Yi River, the New Shu

River and the North Kiangsu Irrigation Canal. These brought large areas under irrigation. During the Cultural Revolution the New Pien River and the Red Guard River were opened. Today excellent harvests of grain and cotton are the rule rather than the exception in the Huai River valley.

Mountains

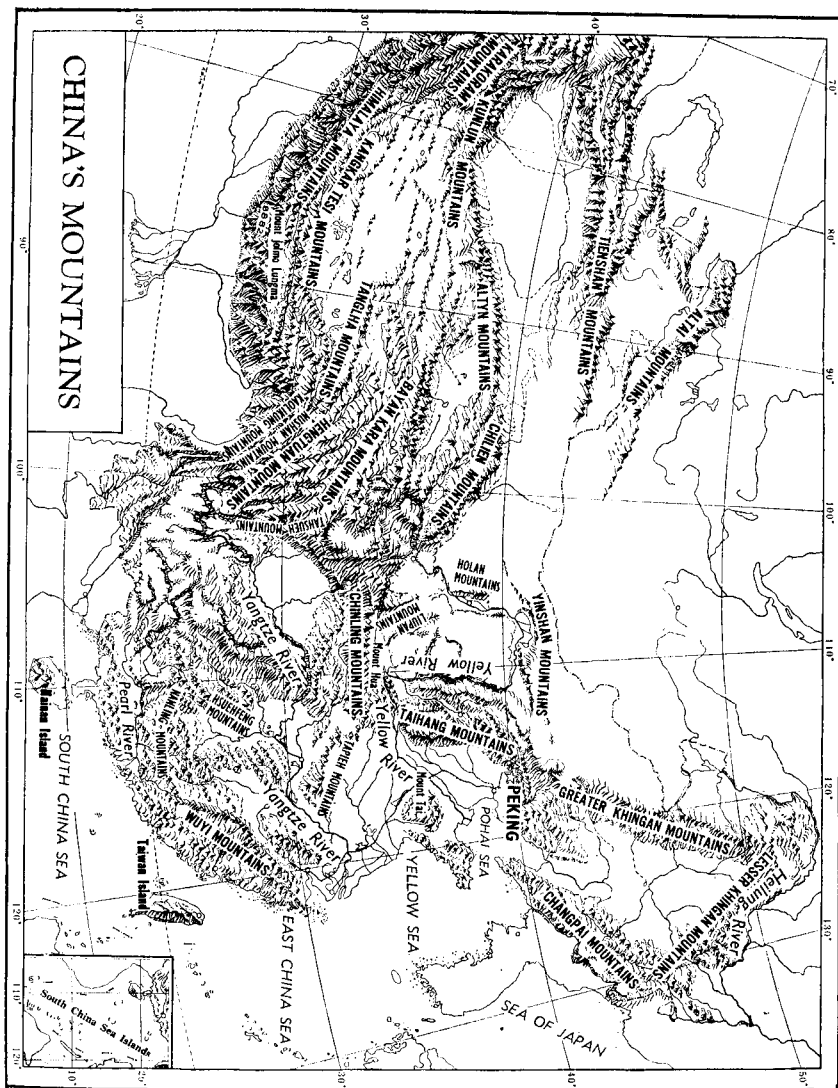
CHINA'S mountain ranges crisscross the country in a complex pattern. They may be divided into the following three groups according to the direction in which they run.

- **East-West Ranges**

China's most important ranges all run in this direction. This group includes nearly all the magnificent high ranges of western China — the Altai, Tienshan, Kunlun, Karakoram, Kangkar Tesi, Himalaya, Chinling and Nanling ranges.

The Altai Mountains, crossing the northern tip of the Sinkiang Uighur Autonomous Region, are generally over 3,000 metres above sea level. They gradually decrease in height as they run southeast to the People's Republic of Mongolia.

The Tienshan Mountains run across the middle of Sinkiang and divide it into the Dzungarian and Tarim



basins. Between 250 and 300 kilometres wide from north to south and 3,000-5,000 metres in height, the parallel ranges of cloud-enveloped peaks enclose some depressed basins such as the well-known Ili Valley in the west and the famous Turfan Depression in the east, 154 metres below sea level. The peaks are around 7,000 metres in the west and gradually become lower as the range runs eastward. Continuing east past Urumchi, it gradually disappears into the desert. Because of the influence of air currents from the Arctic Ocean, the northern slopes of the Tianshan range are moister than the southern ones. The Tianshan Mountains are the major pastoral area in Sinkiang.

The Kunlun Mountains: Starting from the Pamirs in the west, they extend eastward to the western edge of the Szechuan Basin. Their relatively flat tops are generally over 5,000 metres, and quite a few are 7,000 metres. There are many glaciers in the western section. The eastern section, being deep inland, has an extremely dry climate.

As it extends eastward the Kunlun range splits into three branches. The northern branch is the Altyn range, which further east becomes the Chilen Mountains. These two make up the northern rim of the Chinghai-Tibet Plateau. The Chilen Mountains, located south of the Kansu Corridor, are generally over 4,000 metres. The central branch of the Kunluns is the Chimen Tag range, which together with the Altyn range surrounds the Tsaidam Basin, a depression in the Chinghai-Tibet Plateau. The southern branch is the Kokoshili range, which further east becomes the Bayan Kara range, the watershed between the Yangtze and Yellow rivers.

The Karakoram Mountains: Starting in southwestern Sinkiang, they extend eastward into northern Tibet where they run southeast. The snowclad peaks average over 6,000 metres, with massive glaciers in between.

The Kangkar Tesi Mountains: Situated north of the Yalutsangpo River, they are the watershed between the continental plateau drainage system and the Indian Ocean drainage system. The peaks are around 7,000 metres.

The Himalaya Mountains: Standing along the southern rim of the Chinghai-Tibet Plateau, they form an arc protruding southward. The main part of the range lies in China. "Himalaya" means "Abode of Snow" in Tibetan. The average height of these mountains is more than 6,000 metres. West of the town of Yatung there is a string of peaks over 8,000 metres, among them the world's highest, 8,882-metre Jolmo Lungma, located on the China-Nepal border. The Yalutsangpo River flows from west to east along their northern foothills and at 95 degrees east longitude turns south and passes through the Himalayas, where it has cut magnificent gorges.

The string of lofty Himalayan peaks blocks the moist air currents blowing up from the Indian Ocean. As a result, the southern slopes of the range have abundant rainfall and a lush covering of vegetation while the northern slopes, in sharp contrast, are dry with sparse vegetation. As the mountains increase in height the natural panorama keeps changing in a series of belts of differing vegetation. Because the mountains rise abruptly here, these belts are unusually pronounced.

When one ascends from a river valley at 2,000 metres to a peak of over 8,000 metres, the natural panorama changes rapidly although one covers a horizontal distance of only a few dozen kilometres. In the warm moist lowlands broadleaf evergreen trees thrive, forming a forest belt. With increasing altitude, the warmth-loving broadleaf trees become fewer and disappear, while the hardy needled types gradually appear and become dominant, forming another forest belt. Further up, because of insufficient warmth, the trees are replaced by brush. Still higher this gives way first to meadows and then a belt of lichen. The highest region is one of permanent snow. The changes in scenery one sees in ascending the mountain are the same as those one would see if one were to travel from warm south China to the frigid North Pole.

The Chinling Mountains extend for about 1,500 kilometres across central China from southern Kansu to the lower reaches of the Huai and Yangtze rivers, and separate these two. These mountains are the watershed between the Yellow and Yangtze river valleys. The stretch in Shensi is typical, their height averaging between 2,000 and 3,600 metres. The northern slopes are steep, the southern slopes more gentle. While making it difficult for moist ocean air currents to penetrate deep into the northwest, they also keep the cold northern air from descending further south, so that southern Shensi and Szechuan are hit less often by fierce cold waves. The Chinling Mountains thus form a natural dividing line between China's temperate and sub-tropical zones. The rivers on the southern slopes are long, while those on the northern slopes are mostly short and small.

The Nanling Mountains: Running from northern Kwangsi through Hunan and Kwangtung to southern Kiangsi, they separate the valleys of the Yangtze and Pearl rivers. The main watershed is unusually crooked. Generally over 1,000 metres, they reach 1,800 metres at the highest point. Among the granite mountains are many passes and basins which are both low and level. Many of these have become vital passages for north-south communication. The Hsingan Canal built in the northwest corner of Kwangsi over 2,000 years ago during the Chin Dynasty cut through these valleys to connect the drainage systems of the Yangtze and Pearl rivers. Today's Hunan-Kwangsi Railway also follows this path. Though not very high, the Nanling Mountains block northern cold waves to a certain extent, so that to the south the climate is warm and the fields are green all year round.

● Northeast-Southwest Ranges

These are found mainly in two chains located in the eastern part of China. The eastern chain includes the Changpai Mountains in the northeast as well as the ranges which extend through the Liaoning and Shantung peninsulas to Chekiang and Fukien provinces. The range in Fukien which runs parallel with the seacoast is most typical. The highest range in the chain, the Changpai Mountains have peaks reaching over 2,700 metres, but they are generally around 1,000 metres.

The western chain extends south from the Greater Khingan range in the northeast through north China's Taihang Mountains and the mountains of the Yangtze

Gorges to the Hsuehfeng Mountains in Hunan. This series of ranges forms the eastern rim of the Inner Mongolian, loess, and Yunnan-Kweichow plateaus.

These northeast-southwest ranges stand squarely in the path of the southeastern monsoon, weakening its inland penetration. Thus they, especially the western chain, are the basic dividing line between the moist east and the arid west. The Greater Khingan range is the most typical in this respect.

The Greater Khingan Mountains: Located in the northern part of northeast China, they extend 800 kilometres from north to south and 200-300 kilometres from east to west. The ridges are generally 1,100-1,400 metres high. These mountains are rounded, the slopes rarely over 20 degrees. The eastern slopes are much steeper than the western, which are relatively gradual. The whole northern part is covered with forests. From a distance the mountains look like gently rolling green waves.

● North-South Ranges

These ranges are mainly distributed in western Szechuan and Yunnan in the southwest and in eastern Taiwan Province.

The Hengtuan Mountains: A series of parallel north-south ranges run from the southward turn of the Yalu-tsangpo River to western Szechuan and Yunnan. Among these are the Tahsueh, Nushan and Kaolikus mountains. High and with deep valleys, they are a block to east-west travel, hence their name — Hengtuan — which

means "cut across" in Chinese. They are between 4,500 and 5,000 metres in the northern stretch and gradually decrease in height toward the south. In Yunnan, they are less than 3,000 metres high.

Though the Hengtuan Mountains are not far from the sea, because they rise abruptly the rain-bearing southeastern monsoon from the Pacific and southwestern monsoon from the Indian Ocean do not penetrate their interior. The valleys therefore are generally arid.

The mountain range in eastern Taiwan Province also runs roughly from north to south, and includes the highest peak in southeast China — 3,950-metre Yushan Mountain.

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