

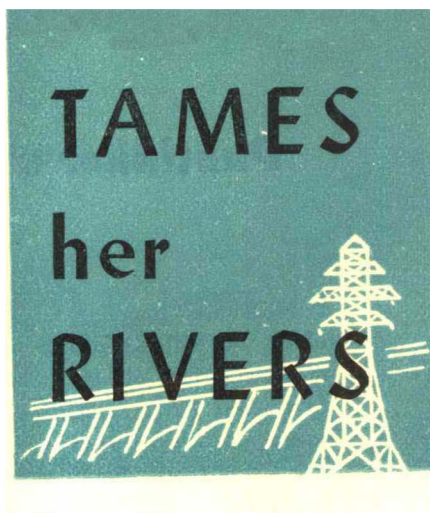


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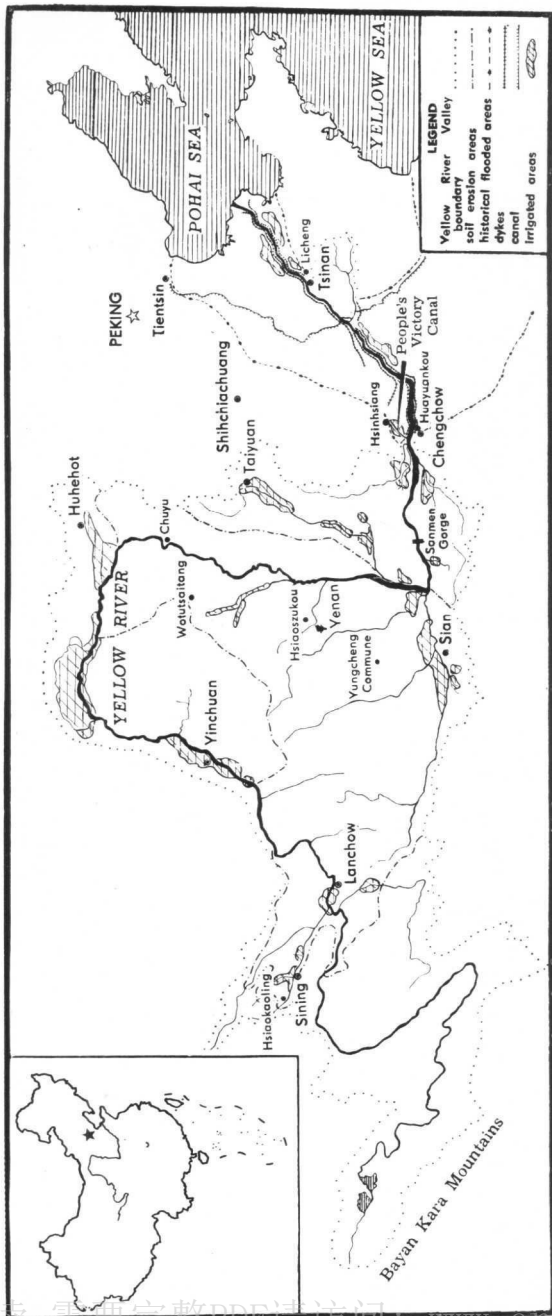
CHINA TAMES HER RIVERS

Publisher's Note

SINCE the founding of New China, the Chinese people under the leadership of the Chinese Communist Party have been successful in their efforts to control China's principal waterways, particularly the main rivers — the Yangtse, Yellow, Huai and Haiho. This booklet contains five articles dealing with the harnessing of these four rivers. Some of the accounts have been published in *China Reconstructs* and *Peking Review*.

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SKETCH MAP OF THE YELLOW RIVER



by Huang Chun

A New Chapter in Taming the Yellow River

ORIGINATING in the Bayan Kara Mountains on the Chinghai-Tibet Plateau, the Yellow River, China's second longest river, flows 4,845 kilometres winding its way eastward and emptying into Pohai Bay. It goes through Chinghai Province, Kansu Province, the Ningsia Hui Autonomous Region, the Inner Mongolian Autonomous Region, and the provinces of Shensi, Shansi, Honan and Shantung. The Yellow River basin covers 745,000 square kilometres.

The Yellow River valley was the political and economic centre of the country and the cradle of a splendid culture for quite a long time. It is still an important area today when China is engaged in socialist

The author, an engineer on the Yellow River Water Conservancy Committee, has taken part in the work to harness the river for more than 20 years.

revolution and construction. There are 300 million *mu*¹ of farmland and 110 million inhabitants in the vast valley region on the upper and middle reaches and in the areas along the lower reaches of the river. The rich water resources of the Yellow River and its tributaries are valuable in the building of our socialist motherland.

However, during the long years of reactionary rule under the feudal dynasties and the Kuomintang the Yellow River could not be harnessed and developed. Soil erosion, flood and drought in the river basin were unchecked. Because the river had brought untold suffering to the Chinese people, it was known abroad as a harmful river. In their efforts to cover up the brutality and impotence of the reactionary classes and to hoodwink the people, some decadent, reactionary bourgeois "specialists" prophesied that soil erosion in the Yellow River basin was "permanent" and "could not be changed", and that "the North China Plain would also become deserts in the near future".

Led by the great leader Chairman Mao and the Communist Party, the Chinese people overthrew imperialism, feudalism and bureaucrat-capitalism, which lay like three big mountains on them, and became masters of their country.

Chairman Mao has always shown deep concern for harnessing the river and inspected areas along it many times. As early as 1952 when China was rehabilitating its national economy, he issued the call "**Work on the Yellow River must be done well**". This reflected the desire of the more than 100 million people in the river

¹ One *mu* is equal to one-fifteenth of a hectare.

basin, expressed the great determination of the Chinese people to conquer the river and marked an entirely new stage in harnessing the river.

Notable achievements have been made as a result of this call and by relying on the masses, proceeding from agricultural development, carrying forward the revolutionary spirit of self-reliance and hard struggle and using materialist dialectics to understand and transform the river.

The people have defeated floodwaters on the lower reaches for more than 20 years running and reversed the dangerous situation in pre-liberation days when the river overflowed the banks two years out of three. Enormous soil conservation work was done on the upper and middle reaches where soil erosion ran wild. Sanmenhsia and four other big key water conservancy projects were built on the river's main course and a group of big, medium and small reservoirs were completed on its tributaries. Non-existent before liberation, hydro-electric power stations are supplying electricity to industry and agriculture. Irrigated land in the basin exceeds 44 million *mu*, 3.7 times as much as before liberation. Compared with 1949, grain and cotton output in the entire valley increased 79 and 137 per cent last year.

These achievements are great victories for the Chinese people who have mastered Mao Tsetung Thought and implemented Chairman Mao's revolutionary line. The profound changes have shattered the ravings of reactionary bourgeois "specialists" and eloquently showed that the Chinese people are able to conquer the Yellow River.

The course of harnessing and conquering the Yellow River was not one of plain sailing. The renegade, hidden traitor and scab Liu Shao-chi and his gang continuously interfered in the work by pushing the counter-revolutionary revisionist line in harnessing the river. The focus of the struggle between the two lines has always been putting proletarian politics in command and relying on the masses to harness the Yellow River, or putting vocational work in command and relying on specialists. Guided by Chairman Mao's revolutionary line, the masses firmly fought Liu Shao-chi's counter-revolutionary revisionist line and guaranteed that the work of harnessing the Yellow River advanced along the correct road.

■ Defeating Floods

The biggest damages brought by the Yellow River in the past were the floods on its lower reaches. Carrying huge amounts of silt downstream, the river continuously choked up its bed on the lower reaches so that it is higher than the ground. Generally this section is three or four metres above the ground and in certain places as high as ten metres. It relies entirely on the dykes to hold the floodwaters. Because the reactionary ruling classes in the past ignored the people's safety, the dykes were low and full of defects and gave way whenever there were fairly big floodwaters.

According to statistics, there were more than 1,500 dyke breaches on the lower reaches of the Yellow River and 26 major changes in its course in some 2,000 years before liberation. The floods affected Tientsin in

the north and the Huai River in the south, spreading over an area of 250,000 square kilometres. This seriously threatened the safety of about 100 million people in the Haiho and Huai valleys. Whenever the Yellow River overflowed or changed course, it caused tremendous losses in lives and property. For instance, when the river broke its dykes in 1933 it flooded an area of 12,000 square kilometres embracing 67 counties in the three provinces of Hopei, Shantung and Honan. The flood affected 3,640,000 people and took 18,000 lives.

The vicious reactionaries often used the Yellow River as an instrument to slaughter the people and maintain their reactionary rule. They deliberately created disasters by breaking the dykes and making the river change course. Adopting a policy of non-resistance towards the aggression of Japanese imperialism, the Kuomintang and Chiang Kai-shek went out of their way to break the Yellow River dyke at Huayuankou near Chengchow, Honan Province, in 1938 in order to cover their flight. This made the river change course to the south and flooded 54,000 square kilometres of land in 44 counties in eastern Honan, northern Anhwei and northern Kiangsu. A total of 12.5 million people were affected and 890,000 of them died. In addition, it created the vast silt-covered desolate stretches of land known as the flooded Yellow River region.

Led by the Party and relying on the masses, the battle against floods on the lower reaches started in 1946 when the Chinese people had just won their victory in the anti-Japanese war. The Kuomintang and Chiang Kai-shek supported by U.S. imperialism launched an all-out attack against the liberated areas. To co-ordinate

with their military actions, they hurriedly sealed the dyke at Huayuankou, at the same time sabotaging work to repair the old dykes in the liberated areas under the pretext of "diverting the Yellow River to the old channel". What they really wanted was to use water in place of soldiers to divide and flood the Hopei-Shantung-Honan and Pohai Liberated Areas in the river's old channel and along its banks.

Responding to the Party Central Committee's militant call "Opposing Chiang Kai-shek and harnessing the Yellow River", heroic army-men and civilians in the liberated areas, rifle in one hand and spade in the other, rose up to battle valiantly against the enemy and floodwaters in the revolutionary spirit of daring to struggle and daring to win. The Yellow River dykes needed rebuilding, so millions of people took up the job. Everybody contributed his share to solve the shortage of raw materials and the people provided 150,000 cubic metres of stone and large numbers of bricks in a short period. While organizing resistance to bombings by enemy planes and the enemy's military attacks, the army-men and civilians raced against time to build mattress revetments to protect the dykes. After indomitable struggles, they finally controlled the floods of 1947 and 1948 and won victories in battling Chiang Kai-shek and the Yellow River. This was a brilliant overture to the work of harnessing the river.

Under the leadership of the Party, the people along the lower reaches set out on the enormous job of repairing dykes and preventing floods after liberation. In more than 20 years they have repaired and reinforced

1,800 kilometres of dykes and changed some 5,000 sections of mattress revetments into stone ones. This involved 350 million cubic metres of earthwork and more than 9 million cubic metres of stonework. The big dykes extending hundreds of kilometres along the river took on a new look and became the reliable material base for conquering Yellow River floods.

But controlling the floods depends not merely on dykes. It depends primarily on the wisdom and strength of the millions of people along the banks of the river. Big floodwaters rarely known before occurred on the lower reaches in 1958 and in most places the water level exceeded the height by which the dykes could safely confine the waters. The situation was especially dangerous near Tsinan, Shantung Province, where the floodwaters were only half a metre below the dykes. Led by the Party, two million armymen and civilians rushed to the banks and heroically declared: "As long as we are here the dykes stand firm; the water rises, so will the dykes." In one day and night they built 600 kilometres of small dykes on the main dykes. They finally defeated the floodwaters and ensured the safety of the nearby areas.

Chairman Mao has taught us: **"What is a true bastion of iron? It is the masses, the millions upon millions of people who genuinely and sincerely support the revolution."** The living fact of continuously harnessing the Yellow River floodwaters in the past 24 years eloquently proves this teaching to be an incontestable truth. It also convincingly proclaims the bankruptcy of "relying on specialists to harness the Yellow River", a revisionist line pushed by Liu Shao-chi and his gang.

■ Checking Soil Erosion

The upper and middle reaches of the Yellow River contain the world's largest loess highland which covers 430,000 square kilometres. Criss-crossed by numerous gullies, this area of rolling hills has loose soil but little vegetation. After a storm, rain-water carried away large quantities of top soil. A total of 1,600 million tons of silt was carried down from this area to the lower reaches each year and the volume added up to some 1,100 million cubic metres. If this silt was built into a dyke one metre high and one metre wide, it would be long enough to circle the equator 27 times. The loss of such a huge amount of silt each year reduced the cultivated areas, diminished soil fertility, aggravated drought and lowered farm production in the regions along the upper and middle reaches. Moreover, the enormous quantity of silt flowing down to the lower reaches steadily raised the river bed in this section and often caused serious floods. Therefore, checking soil erosion is not only necessary for transforming the poor and backward state in the affected areas, but the foundation for harnessing the Yellow River permanently.

Acting according to Chairman Mao's instruction **"Attention must be paid to soil conservation"**, the working people have since liberation criticized the idea that "soil erosion cannot be changed" — an idea cherished by the cowardly and the lazy. With the revolutionary heroism of **"transforming China in the spirit of the Foolish Old Man who removed the mountains"**, they set out dauntlessly to remake the desolate mountains and gullies and this mass movement has seen one upsurge after another.

In the course of transforming nature, the masses resisted the interference of the counter-revolutionary revisionist line, including "material incentives", pushed by Liu Shao-chi and his like. Persistently relying on the collective economy and combining the method of building engineering works with raising trees and sowing grass, they undertook concentrated, continuous and long-term transformation of hilltops and gullies one by one. A whole series of successful experience has been created. This includes building terraced fields on mountain slopes, damming gullies to silt up land, improving soil and creating farmland on river flats with the aid of silt from mountain floods and planting trees and grass on steep slopes and desolate mountains. Soil erosion has been effectively checked wherever such measures were adopted. They thus promoted farming and contributed to harnessing the Yellow River. On the vast loess highland today there are many advanced units which have changed their unfavourable natural conditions.

Shansi Province's Chuyu Brigade is an example. With the Yellow River in front and hills behind, it has over 400 households with more than 2,000 people; its nearly 20,000 *mu* of land are scattered over three ridges, 12 gullies, a stretch of river flats and a dozen hills. Soil erosion here was very serious. Before liberation, the brigade was hit by flood, drought and other natural disasters nine years out of ten. As soon as they set up their elementary agricultural co-ops in 1952, the poor and lower-middle peasants began concentrating on soil conservation. In the spirit of the Foolish Old Man who removed the mountains, they have been digging every day for almost 20 years. Because they lacked experience

at first, the dams built were washed away by mountain floods. Refusing to be discouraged or retreat, they summed up their experience and carried on their work. Aware that the saplings on the hills were in danger of withering, they carried water from the Yellow River to water them.

After a long period of hard work, they finally transformed over 4,000 *mu* of sand-stone river-bed into fields giving high stable yields. They built 370 earth-stone dams in the 12 gullies, terraced more than 1,500 *mu* of fields on the slopes, planted over 10,000 *mu* with trees and some 2,200 *mu* with grass, forming a 5-kilometre-long and 20-metre-wide shelter belt along the banks, and built a pumping station. Now the Chuyu Brigade is covered with abundant vegetation and has achieved all-round development in agriculture, forestry, animal husbandry and side-occupations. The per-*mu* yield of grain has jumped from 50 or 60 *jin*¹ before liberation to some 520 *jin* while that of sorghum has hit 1,990 *jin*. Gone for ever are the days when the brigade was subjected to soil erosion and low yields caused by frequent natural disasters.

There are many other advanced units like the Chuyu Brigade. After a 15-year-long battle the Hsiaokaoling Brigade on the Chinghai Plateau has successfully checked soil erosion over 80 per cent of its land, with the result that it has registered a per-*mu* grain yield three times as much as before. The Yungcheng Commune in Kansu Province has terraced and afforested all the nearby barren mountains and gullies in six years. The Hsiao-

¹One *jin* is equal to half a kilogramme.

szekou Brigade in the vicinity of Yen-an, which has only 27 households, has built 27 dams to silt up land, converting the hitherto desolate gullies into granaries.

■ Turning the Harmful into the Beneficial

Before liberation, there was a saying: "Benefiting the Hotao Plain alone, the Yellow River brings much harm to other areas."¹ For thousands of years, the Yellow River waters had only been used to irrigate farmland on the Hotao Plain between Ningsia and the Inner Mongolian Autonomous Region; it brought nothing but flood disasters to people living along its lower reaches.

While winning victories in their struggle to control the floods and improve the soil since nationwide liberation, the people have gone all out to divert Yellow River water to irrigate farmland and develop hydro-electric power works. Now more than 40 million *mu* of farmland on the upper and lower reaches are irrigated by the river water and electric power is supplied to industrial and agricultural production. In order to explore ways of using water resources on the lower Yellow River, the people in 1951 built the People's Victory Canal, the first big project to divert the Yellow River water to irrigate the farmland on its lower reaches in the Hsinhsiang Region of Honan Province. The canal runs through a plain covering six counties and cities on the northern bank of the Yellow River. It is located at the old Yellow

¹ Taken as a whole, the two plains between the Holan Mountains and the Yellow River in Ningsia on the upper reaches of the river and between the Wuchia and Yellow Rivers in Inner Mongolia are called the Hotao Plain.

River course. Seriously jeopardized by drought, waterlogging and alkali, farming here was very backward. In 1952 when this canal was initially completed and put into service, Chairman Mao went there on an inspection and issued important instructions which greatly encouraged the people in the irrigated areas. Having resisted obstruction by the revisionist line of Liu Shao-chi and company over the past decade or so, the working people in the irrigated area, upholding the spirit of enterprise and hard struggle, dug a network of irrigation and drainage canals with a total length of 7,500 kilometres, built large numbers of sluice-gates and culverts and sunk over 2,500 power-operated wells, thus basically meeting the demands of "ensuring irrigation in times of drought and drainage in times of waterlogging".

Applying the concept of "everything divides into two" in practice, they analysed the dual character of the river's silt. They saw both the unfavourable aspect — too much silt would choke the canals — and the favourable aspect — the silt could be used to improve the soil. In a planned way, they first directed the river water into the low-lying sandy land to let most of the silt precipitate and then channelled the water into the canals to irrigate farmland. In this way, they not only reduced the amount of silt blocking the canals but also transformed large tracts of barren alkaline land into fertile fields and turned harmful silt into something beneficial. The irrigated area of the People's Victory Canal has now expanded from the originally planned 400,000 *mu* to 600,000 *mu* and average per-*mu* grain yield in the whole irrigated areas has shot up from 70 or 80 *jin* before liber-