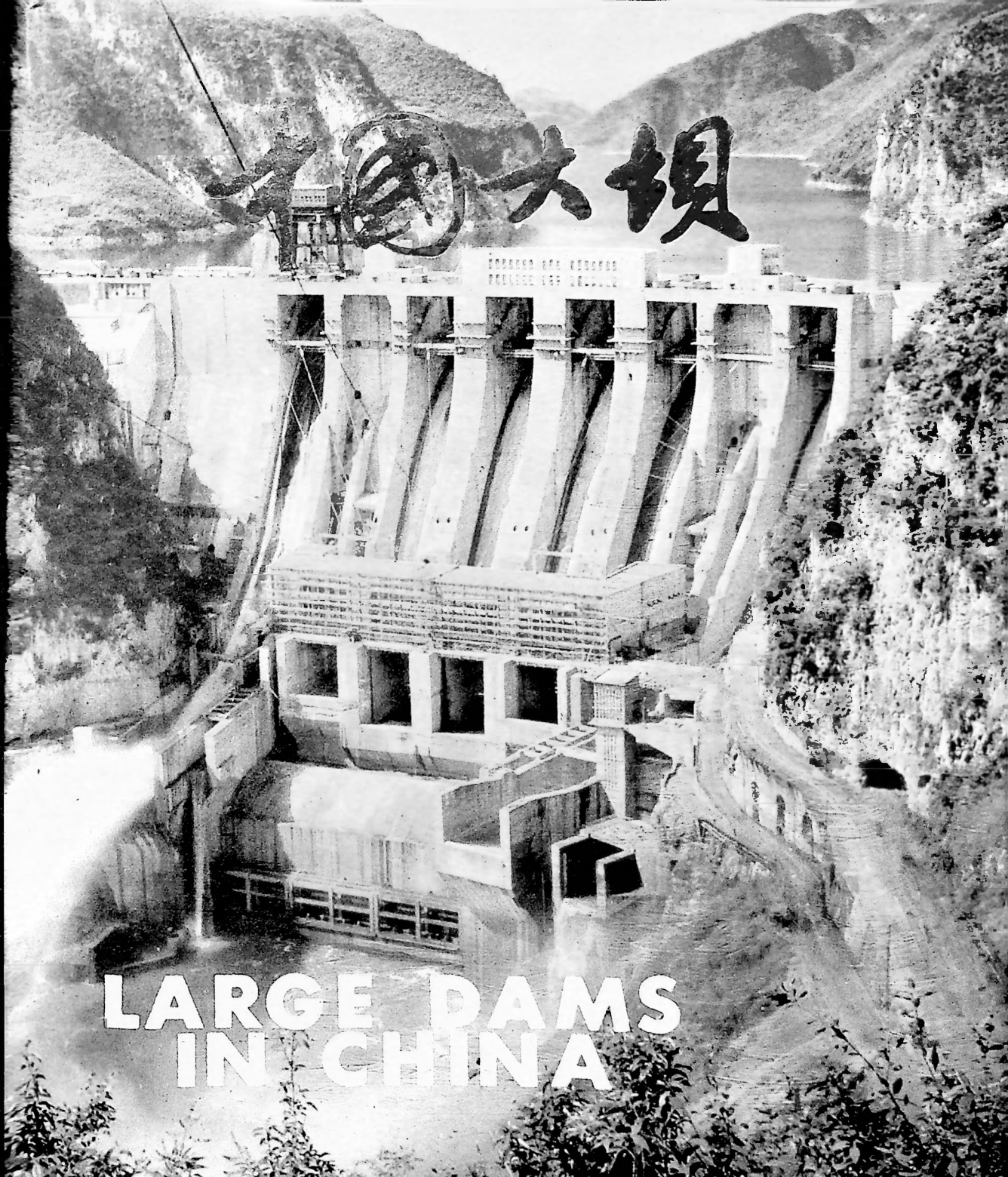


中國大壩

LARGE DAMS
IN CHINA



中国大坝

中国大坝编辑组

1980

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FOREWORD

China is rich in water resources with numerous rivers on its vast territory. There are over 1,500 rivers each with a catchment area exceeding 1,000km². The total length of these rivers comes to 420,000 km. Some major rivers are famous in the world for their great lengths. The average annual precipitation over the whole country is about 630 mm and the average annual runoff about 2700x10⁹m³. The theoretical hydropower potential is estimated to be 680,000 MW, 55% of which is considered feasible to be developed technically and economically.

As early as 2,000 years ago, the Chinese people started building dams and levees for harnessing the rivers and making use of water resources so as to promote agricultural production. In 600 B.C., a reservoir for irrigation, known as Anfengtang, was constructed in Shouxian County in Anhui Province. In 250 B.C., the Dujiangyan Irrigation Project was built in Guanxian County in Sichuan Province. The Lingqu Canal, connecting the Changjiang (Yangtze River) water system with that of the Zhujiang (Pearl River), was completed in 219 B.C. Many other subsequent old water works, such as the great levees along the Huanghe (Yellow River) and the Changjiang, the dykes around the Hongze Lake, the Qiantangjiang Seawalls and the Grand Canal etc. were also well known for their broad scale and marvelous sights. Most of these ancient projects through maintenance and reconstruction in successive dynasties are still now in good service. They serve as an outstanding example of the brilliant achievements of science

and technology in ancient China as well as the intelligence and diligence of the Chinese people.

Since the founding of the People's Republic of China, rapid advances have been made in rational exploitation and multi-purpose utilization of water resources. According to incomplete statistics by the end of 1979 (excluding the figures in Taiwan Province), over 84,000 reservoirs of all sizes were completed in the whole country, with a total storage capacity of more than 400x10⁹ m³. Among them, 319 are large reservoirs each with a storage capacity greater than 100 million m³. The total irrigated area in China at present covers about 47 million hectares and there are 146 irrigation projects, each of which has an irrigated area over 20 thousand hectares. Among the 128 large and medium hydroelectric power stations, 11 have an installed capacity of over 300 MW. Together with small stations, the total installed capacity has rapidly increased up to one hundredfold that before liberation.

With the completion of so many water projects, dam construction technique has been on continual improvement. Dams of various types and with dam height over 60 m amount to 89. Among them, there are 37 earth and earth-rock dams, 32 concrete dams and 20 masonry dams, accounting for 41.6%; 35.9% and 22.5% of the total number respectively. For dams higher than 100 m, 11 have been completed and 12 are under construction. The dams under construction, such as Gezhouba, Wujiangdu, Baishan,