

FEATURE



THE GRAND CANAL of CHINA

By Ruby Tsao

As the site of the international G20 meeting held on September 4-5, 2016, all eyes were on the city of Hangzhou. “Heaven above, Suzhou and Hangzhou below” is a saying to mean Hangzhou is “heaven on earth” to the Chinese. Italian traveler Marco Polo in the 13th Century marveled at its beauty and riches. Hangzhou was one of the seven ancient capitals of China. Since ancient times, scholars wrote poetry to praise the beauty of the famous West Lake. It is well-known for its silk and “dragon well” tea. Today, it is the headquarters of the e-commerce giant Alibaba. Perhaps less well-known is its connection with China’s Grand Canal, the world’s earliest and longest man-made waterway running from Hangzhou to Beijing. The Grand Canal is another ancient mega-project on the scale of the Great Wall and it’s still in use today. It runs for 1766 kilometers (1104 miles), a distance more than 10 times the length of the Suez Canal, and 22 times that of the Panama Canal. It has played a significant role in the

communication, transportation, trade, economic development, cultural exchange and unification of China since ancient times.

BACKGROUND

China is located on the eastern part of the Eurasian continent, west of the Pacific Ocean, stretching 6200 kilometers (3720 miles) from east to west, 5500 kilometers (3300 miles) from north to south. It is one of the largest countries spanning 4 time zones with 9.6 million square kilometers land area, a population of 1.381 billion in 22 provinces, 5 autonomous regions, 4 direct controlled municipalities of Beijing, Tianjin, Shanghai and Chongqing, plus 2 self-governing special regions of Hong Kong and Macau, and sovereignty claims over Taiwan.

Its diverse landscapes range from forest steppes and Gobi and Taklamakan deserts in the arid north to subtropical forests in the moist south. Himalaya, Karakoram, Pamir and Tian Shan mountain ranges separate China from 14

countries in Central Asia and South Asia—Russia, India, Kazakhstan, Mongolia, Pakistan, Burma or Myanma, Afghanistan, Vietnam, Laos, Kyrgyzstan, Nepal, Tajikistan, North Korea and Bhutan in descending order of countries' sizes—most of these countries are located in areas involved in the “One Belt One Road” projects.

Two major rivers—the world's third longest Yangtze River and the sixth longest Yellow River run from Tibetan Plateau in the west to densely populated eastern seaboard. Lanchang River also originates in Qinghai Province, but runs north to south and becomes the Mekong River through the Southeast Asian countries of Myanma, Laos, Thailand, Cambodia and Vietnam before draining into South China Sea. China's coastline along Pacific Ocean runs 14500 km (8700 miles) long bounded by Bohai, Yellow, East China and South China Seas. Topography ranges from elevation of over 8000 meters in the west dropping to the coast in the east. With the Yangtze River and Yellow River and most tributaries running from west to east, it's easy to see the benefit to build the Canal running from north to south connecting existing rivers to form a vast network of waterways, the favored mode of transportation in ancient times. China is a mountainous country making travel and communication very difficult. In imperial



times, people used to speak all kinds of dialects. Fortunately, they all understand the same written language. The Grand Canal served to connect and unite the country for 1500 years. Only in the 20th Century since Sun Yat-sen established the republic in 1912, Mandarin has been adopted as the national language, the language taught in schools.

Primitive canals were built in the ancient times. Sections were built in different areas and different times before the Han Dynasty (206 BCE to 220 AD). The Sui Dynasty (589-618) linked the sections and began the major building of the Grand Canal to connect 6 administration districts: Beijing, Tianjin, Hebei, Shandong, Jiangsu and Zhejiang Provinces to

end in the south at the city of Hangzhou. It linked 5 west to east running rivers —Yellow River, Hai River and Yangtze River, Huai River, Qiantang River to facilitate transport of goods, people and soldiers in war times; exchange of ideas for cultural integration, trade for economic development contributing to a unified China.

HISTORY

As in the ancient legend of the West, there were also great floods in China. The legendary Da Yu (the Great Yu) in 2100 BC spent 13 years to tame the Great Flood by dredging nine rivers and building 2 canals Naiqu and Zhongqu to channel the flood waters to the sea. (Footnote:

Two major rivers—the world’s third longest Yangtze River and the sixth longest Yellow River run from Tibetan

Plateau in the west to densely populated eastern seaboard. Lanchang River also originates in Qinghai Province, but runs north to south and becomes the Mekong River through the Southeast Asian countries of Myanma, Laos, Thailand, Cambodia and Vietnam before draining into South China Sea.

1. Wu Shunming: Da Yun He (The Grand Canal), Huang Shan Shu She, 2013, p. 2). The Great Yu established the first dynasty Xia (2205-1766 BC). Ever since, succeeding dynasties continued to build, expand, dredge and repair canals for the transport of grain and raw material and for flood control.



The ancient Grand Canal was built in 486.

The most extensive work was done in the Sui Dynasty (589-618). Emperor Sui Wendi ordered excavation of the Grand Canal to facilitate shipping of grain and materials from the rich south to the capital Xi’an in the north. In 605, Emperor Sui Yangdi moved the capital to Luoyang and enlarged the Grand Canal, one to link Yellow River, one to connect to the Yangtze

River, with royal roads along the banks of the canal. He celebrated with great fanfare in a luxury fleet to travel to Yangzhou. But he over-extended the country’s resources.

Some 6 million workers were drafted for construction projects in the new capital, the Great Wall and the Grand Canal at the same time. For excavation of the canal alone, 2 million workers died (Footnote 2, Wu Shunmin: Da Yun He, Huang Shan Shu She, 2013, p.40). The hardship and heavy taxes resulted in the downfall of the Sui Dynasty to usher in the splendid Tang Dynasty (618-907) and Song Dynasty (960-1280) with a period of disunion of Five Dynasties (907-960). During the Five Dynasties, Hangzhou, located in the state of Wuyue, was the only city that escaped destruction in the battles to unify the country in the Song Dynasty.

North of the Yangtze River was prone to frequent floods from Yellow River. Driving on the highway built on the banks of the Canal from Hangzhou to Beijing, one can see that the level of canal water is higher than the ground level on the

other side on sections of the highway. Over the years, the Grand Canal has contributed to water conservation, flood control, irrigation besides the functions of transportation facilitating economic development, trade and cultural exchanges between the north and south. The Grand Canal runs along important cities of Beijing, Tianjin, Jining, Yangzhou.

Wuxi, Suzhou and Hangzhou. Actually, these cities were created because of the Canal. Construction materials were transported through the Canal for building the capital Beijing during the Yuan Dynasty (1298-1368) and Ming Dynasty (1368-1644). Emperor Kanxi (1662-1723) and Emperor Qianlong (1736-1796) of the Qing Dynasty (1644-1911) each made 6 trips from Beijing to



Life along side of grand canal

lakes. There are rows of willow trees waving gently along the banks of the Canal. The traffic and commerce brought prosperity to cities along the way. Points of interest include museums, temples, parks, gardens and private homes. Overnight canal cruises are available in sections of the Canal from Hangzhou to Suzhou and

the south of the Yangtze. In 2014, the Grand Canal became a UNESCO world heritage site.

SOUTH-NORTH WATER DIVERSION PROJECT

The Grand Canal is also the eastern route of the South-North Water Diversion Project. Water from the Yangtze River drawn into the Canal in Jiangsu Province brings 14000 cubic square feet of water through tunnels under Yellow River going downhill to reservoirs near Tianjin. Construction of the eastern route began in December, 2002. It has been delivering water to Tianjin and Beijing since 2012. The central route runs from Han River, a tributary of the Yangtze River, to Beijing and Tianjin. The western route connects 3 Yellow River tributaries to the arid regions of Qinghai, Gansu, Shaanxi, Shanxi, Inner Mongolia and Ningxia. It is not uncommon to see draught in the north and flooding in the south at the same time. The water diversion projects bring relief from chronic water shortage in the north as well as for irrigation of farms.



The Pagoda of Six Harmonies

CANAL CRUISES

Today, the Canal is still a busy waterway to transport bulk materials. The Chinese like to plant willow trees on the banks of rivers and

Wuxi; and Suzhou to Yangzhou. Generally, cruises are expensive. To save time and money, one can have a taste by taking a 30 minute ferry in Hangzhou for 3 yuan (about 45 cents) in an air-conditioned boat from Wulinmen Wharf to the historic Gongchen Bridge built in the Ming Dynasty in 1631, connecting the east and west banks of the Canal. Modern high rise buildings are forbidden along the Canal in Hangzhou. Residences with compatible designs, pavilions, peach trees and willow trees line the banks.

Hangzhou is near the estuary of Qiantang River. The Pagoda of Six Harmonies was built in 970 as a symbol to tame the powerful Qiantang River tides where the River meets the ocean. Its nine floors are nearly 60 meters high, an ancient skyscraper. The top floor beacon served as the lighthouse for night time navigation. The tides are the most spectacular around the Mid-Autumn Festival. The Qiantang River opens to the Hangzhou Bay before flowing to the Pacific Ocean. The 22 mile long Hangzhou Bay Bridge from Ningpo to Shanghai, one of the longest trans-oceanic bridges, completed in 2007, is a modern engineering marvel. Today Hangzhou is a top-ranked tourist destination, a vibrant center of innovation, rich with history, culture and natural beauty.

HIGH SPEED TRAIN

With the advent of the high speed train, there is no need to take the slow boat in China for travel. It's easy to visit cities on the Canal route covering Hangzhou, Suzhou, Wuxi, Nanjing,

Yangzhou, Shanghai, Beijing, Tianjin and Jining—the Canal’s northernmost city in Shandong Province near Confucius’ hometown Qufu. The fast train is spacious and comfortable. It takes only 45 minutes from Hangzhou to Shanghai and 25 minutes from Beijing to Tianjin. A train leaves the station every 10 minutes between Shanghai and Beijing. The trains run from city center to city center, often connected with subways, avoiding traffic jams to and from airports far from city centers. This is the favored mode of transportation today.

###

Ruby Tsao, born in China, went to Taiwan with family in 1949; received BA from National Taiwan University; awarded full scholarship from an international education foundation to study in the US, received MS from the University of Michigan. she has served as President of General Resource Technology, Inc. and treasurer of Tsao Foundation -both organizations to promote utilization and research of renewable resources technology developed by her husband Professor George Tsao. Her interests include travel and writing.

She writes on history and culture in the hopes to promote understanding of China for better US-China relations.