Yellow River Essay, Research Paper

Yellow River: Geographic and Historical Settings

Tw River, or Huanghe, is the second longest river in China. Tracing to a source high up the majestic Yagradagze mountain in the nation’s far west, it loops north, bends south, and flows east for 5,464 km until it empties into the sea, draining a basin of 745,000 sq km, which nourishes 120 million people. Millennia ago the Chinese civilization emerged from the central region of this basin.

As the most heavily silt-laden river in the world, the Yellow River got its name from the muddiness of its water, which bears a perennial ochre-yellow color. The river is commonly divided into three stages. In the upper reaches, the river runs through mountainous and arid regions for 3,472 km, ending at Hekouzhen of Inner Mongolia just before it makes a sharp turn to the south. In the middle reaches, ending at Zhengzhou in Henan province, the river flows south between the Shaanxi and Shanxi Provinces, draining a basin consisting largely of thick deposits of unmodified aeolian loess which is eroded readily by rainfall and wind and accounts for over 90 per cent of the sediment in the main channel downstream. After traversing a 1,206-km course from Hekouzhen to Zhengzhou, the river emerges from narrow mountainous constrictions onto a flat alluvial plain shortly following a sharp turn to the east. The river descends from an altitude of 4,575 m above sea level at the source to 1,000 m at Hekouzhen and 400 m at Zhengzhou.

In the lower reaches, from Zhengzhou to sea for a distance of 786 km, the river is confined to a levee-lined course as it flows in the northeasterly across the North China plain before emptying into the Gulf of Bohai. During two thousand years of levee construction, excessive sediment deposits have raised the riverbed several meters over the surrounding grounds; it is as much as 10 m above the city level of the ancient capital, Kaifeng, on its southern bank, where the levee embankments are 13 km apart. Nearly all rivers to the south of the levee-protected channel drain into the Huai River system, while those to its north into the Hai River system.

The most challenging engineering aspect of taming the Yellow River is without doubt the control of the exceptionally high sediment load that the river carries in its lower reaches, averaging 37 kg of sediment per cu m of water at the present time. An average of 1.6 billion tons of sediment enters the river channel at Zhengzhou annually, of which about 1.2 billion tons is carried out to sea, leaving behind a substantial amount to contribute to the silting of the river channel.

Throughout history much of the river management effort had been devoted to improving the flood prevention capability of the levee-lined channel, with notable success in the period from 200 to 800 A.D. when the channel was kept to its course. But, keeping pace with an ever-rising channel bed was no easy task, and the protection offered by levees could at best be haphazard, especially at times of war. Historical records indicate a progressively frequent levee breaching in the last ten centuries. During such breaches, the flood water would rush onto the surrounding lands, not only inundating farmland and communities, but also taking over existing river channels. The devastated areas would be totally transformed even after the damaged levee sections were repaired and closed, flood water drained, and the river returned to its original channel.

Such devastation caused untold human suffering, and Yellow River gained the unenviable distinction as China’s Sorrow. Records indicate that the river’s levees were breached more than 1,500 times and its course changed 26 times in the last three millennia. A major course change taking place in 1194 A.D. was probably the most devastating economically. Flood water rushed onto the Huai River basin south of the Yellow River and took over Huai River’s drainage system for the next 700 years. The river adopted its present course in 1897 after the final course change occurred in 1855. To this day, floods still ravage frequently the damaged Huai River system, reducing an once flourishing Huai River valley, where the Grand Canal traversed, to destitute poverty.

Efforts in taming the river in the modern times still concentrate on flood prevention in the plain by raising and strengthening 1,300 km of levee embankments lining both the north and south shores of the channel. During high-water stages the entire population residing along the levees would be mobilized to keep a tight vigilance on the conditions of the levees looking out constantly for seepage leaks anywhere along its length. The levees stood intact for the past half-century withstanding numerous high-water stages, and credits must be given to those who managed them.

River’s sediment come entirely from the middle region of the river’s basin, draining a loess-covered terrain consisting of a wind-blown silt deposit of high uniformity. Though the climate there is arid with annual rainfall in the 400-mm range, while the annual evaporation rate is three to four times as much, but during the July-August-September rain season, rain bursts which account for almost half of the annual precipitation erode loess cliffsrapidly bringing a huge amount of the eroded silt into the gullies, from which it is funneled into the rivers and to the main channel, transported laboriously for a distance over 1,000 km before it is flushed out to sea.

The Chinese had settled in the Huang He, or Yellow River, valley of northern China by 3000 BC. By then they had not yet discovered writing or the uses of metals.

The Shang Dynasty (1766-1122) is the first documented era of ancient China. The Shang dynasty ruled the territory of the present-day north-central Chinese provinces of Henan (Ho-nan), Hubei (Hupeh), and Shandong (Shantung) and the northern part of Anhui (An-hui). The highly developed hierarchy consisted of a king, nobles, commoners, and slaves. The capital city was Anyang near northern border of Henan Province. In china, records of the Shang dynasty were written on animal bones and tortoise shells. Artifacts of divination on oracle bones and shells have been one major archeological source of Shang life. Some scholars have suggested that travelers from Mesopotamia and from South Asia brought agricultural methods to China, which stimulated the growth of ancient Chinese civilization. The economy was based on agriculture. Millet, wheat, barley, and possibly, some rice were grown. Silkworms were cultivated, and pigs, dogs, sheep, and oxen were raised. The Shang peoples were known for their use of fade, bronze, horse-drawn chariots, ancestor worship, and highly organized armies. The Shang was an aristocratic society. At the head was a king who presided over a military nobility. Territorial rulers were appointed by him and compelled to support him in military endeavors. Between this aristocratic class and the commoners was a literate priestly class that kept the records of government and was responsible for divination. Shang people worshiped their ancestors and a multitude of gods, the principal of whom was known as Shang Ti, the Lord on High.

The account of the fall of the Shang dynasty that appears in traditional Chinese histories follows closely the story of the fall of the Hsia. The last Shang monarch, a cruel and debauched tyrant, was overthrown by a vigorous king of Chou, a state in the Wei River valley. Situated on the northwestern fringes of the Shang domain, the culture of Chou was a blend of the basic elements of Shang civilization and certain of the martial traditions characteristic of the non-Chinese peoples to the north and west.