

The North Vietnamese Battle of the Dikes

Washington

For more than 2000 years, the peasants of northern Vietnam have been locked in unending battle against nature, trying to stem and control the annual high waters of the Red river with an intricate system of dikes.

The river, spawned in the mountains of Yunnan province in southern China and fed by monsoon rains, races through narrow gorges in its annual summer drive to spill along the vast and fertile plains of the Red river delta, where more than 15 million Vietnamese live and farm.

The terrain along the 300-mile route from China to the rich farmlands can most simply be described as a huge drainboard, tilted down from northwest to southeast.

To meet the crest of the Red river and its tributaries, which usually peak between July and late September, Vietnamese societies have constructed about 2500 miles of earthen dikes with sluice-gates and dams. It is this system that the Hanoi government charges is under United States aerial attack.

The first written mention of the elaborate system is in Chinese chronicles of the

early 11th Century. Some Vietnamese scholars also have found archeological evidence of dikes as far back as the Second Century.

The dikes have been expanded in length perhaps 50 per cent in the last 20 years and have also grown in width and height, vastly complicating the problems of maintenance and control. The growth is constant because the Red river carries along millions of tons of silt that are deposited in the river bed.

In other areas, particularly rising mud bed that is of-gions near Hanoi, the river flows on its own progressively rising mud bed that is often five or six feet above the

level of the fields. A similar situation exists in areas along the Yellow river in China.

WORK

Working on the dikes and repairing them is a constant preoccupation of the North Vietnamese. During a visit by this correspondent to Hanoi in mid-March, hundreds of workers — often led by military men — seemed to be constantly hauling earth to reinforce the vast system near Hanoi.

At that point, as in many parts of North Vietnam, there were actually two separate networks of dikes roughly a quarter of a mile apart. The purpose obviously was to provide a back up system.

The pressure on the dikes at the height of the flood season is immense. Specific data on the flow of the Red river near Hanoi was impossible to obtain, but last month *Le Monde*, the Paris newspaper, published a dispatch predicting that the flow of the Black river, a main tributary, would reach 32,500 cubic meters a second at Son Tay, about 25 miles northwest of Hanoi (a cubic meter is about 35 cubic feet). The dispatch also noted that the peak flow of the floods there in 1910 was 2500 cubic meters a second.

In addition to the river system, there are a number of sea dikes to prevent the seepage of brackish water from the Gulf of Tonkin into crop-growing areas. North Vietnam also has charged that these sea dikes have been bombed by U.S. aircraft.

Many experts believe that the river dike system northeast of Hanoi is highly vulnerable to bombing attacks. Last year, flood waters broke through a 30-mile section of the dikes in the delta section and destroyed much of the 1971 autumn rice crop.

This flooding, which forced North Vietnam to import food from the Soviet Union and China, was described as the worst since 1944. In that year, the dikes along the Red river were breached in 25 areas and thousands of acres of rice were destroyed.

SUPPORT

The repeated North Vietnamese charges of bombing of dikes have been buttressed in recent weeks by a number of news dispatches from Hanoi filed by Jean Thoraval, the resident correspondent there for Agence France-Presse.

Until recently most administration spokesmen in Washington generally denied that dikes had been chosen as targets or inadvertently bombed.

An Air Force general, asked in mid-June whether some dikes could have been accidentally struck, said: "Anything is possible, but I think it's highly improbable."

The official U.S. position was modified by secretary of Defense Melvin R. Laird in a news conference on July 6.

"Some of the dikes and dams may be on roadways that are being used or they may be in a position where antiaircraft weaponry is placed and, of course, our pilots are given the opportunity and they should have this capability to attack North Vietnamese gun emplacements."

Laird went on to say, however, that "the real damage to the dams and dikes of North Vietnam is the damage that was suffered in weakening those dams and dikes last year during the very, very heavy flooding of North Vietnam."

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