

The West Pakistan Flood Commission has estimated the extent of damage caused by recent floods in the various districts of the Former Punjab for the years extending from 1948 to 1960, including numbers of villages damaged or destroyed, loss of human life and livestock, cultivated acreage affected, and the approximate value of crops destroyed. Table 1.1.2 summarizes the estimates of the value of crops lost to floods. Rechna Doab suffered the most extensive crop losses. Bari Doab, along the Ravi River and at the confluence of the Ravi and the Chenab in Multan District, also had sizeable losses. The maximum flood damage occurred in three Districts: Sheikhupura, southwestern Jhang at the confluence of the Ravi and the Chenab Rivers, and the Shahpur portion of Chaj Doab. In all three regions the water table lies within a few feet of the ground surface.

The average annual loss in value of crops due to flood damage appears to be a little less than one percent of the total annual value of crops grown in West Pakistan (see Table 1.6).

River and Canal Waters

The average annual inflow of the Indus and its tributaries, measured at the six gauging stations on the rim of the Indus Plain, is about 170 million acre feet. This is twice the flow of the Nile and more than ten times that of the Colorado River. In Europe, only the Danube compares in size, and in the United States, only the Mississippi and the Columbia are larger. Half the water carried onto the Plain by the rivers is diverted into irrigation canals; a net of about 10 percent is lost by evaporation and infiltration, and the remainder flows to the sea unused, almost entirely during the months of the monsoon floods in summer.

The river flows are highly seasonal. As Table 1.2 shows, 84 percent of the annual flow occurs during the six months of the summer (Kharif) growing season, from April to September, and 16 percent during the winter (Rabi) season, from October to March. Nearly half (44 percent) of the total volume is carried during July and August, and only 8 percent in the four months from November to February. Variations from year to year, though great in absolute magnitude, are comparatively much smaller than the seasonal variations. Over the twenty-five year period from 1921-22 to 1945-46, the maximum annual flow was 189 million acre feet, and the minimum 139 million acre feet.

We estimate that for the five years ending 1956-57, the annual diversion from the rivers into irrigation canals averaged 83.6 million acre feet, of