

## Chapter 1

cover flood plains, are covered with highly uniform soils of sandy silt, and are the most fertile regions of the Former Punjab. They are a few feet higher than the meander flood plains or cover flood plains, and are usually separated from them by low bluffs cut by the meandering rivers.

In Thal Doab, the place of the bar is taken by the sand flats and irregular low hills, covered with shifting sands, of the Thal Desert. Here, in the Thal Desert southeast of the Plain, and in smaller areas in the other Doabs, in Former Bahawalpur, and in Former Sind, the topography has been shaped by wind rather than running water. Sand dunes and hills and wind-eroded remnants dominate the landscape. These areas are sparsely vegetated, mostly uncultivated, roamed by flocks of sheep and goats, and thinly dotted with wells and patches of dry-cropped lands.

At the northern ends of Thal, Chaj, and Rechna Doabs, near the rim of the Plain, the slope of the land steepens slightly, and the alluvial deposits become much thinner. These "piedmont plains" are generally above the reach of the present canal system, and were apparently formed by outwash from the Himalayan foothills, rather than by flood deposition from the great rivers. Similar piedmont plains cover large areas at the foot of the Sulaiman and Kirthar Mountains on the right bank of the Indus.

North of the rim lie the Potwar Uplands of the northern Former Punjab and the Former Northwest Frontier. These are highly irregular in form, hilly, and eroded with small alluvial basins and fans separated by older rocks.

### Areas of easily culturable land

We shall now briefly describe the areas of easily culturable land in each sub-division of the Plain. The most suitable areas for agricultural development are the meander and cover flood plains and the bars. Parts of the wind-blown sand plains and low sand hills are also improvable, as are the piedmont plains, though with more difficulty than the flood plains and bars formed in past times by the major rivers. The active flood plains and desert areas are not easily susceptible to canal or tubewell irrigation and hence it is hard to increase their agricultural productivity.

Within Thal Doab, which has the Thal desert at its center, much of the non-desert area is occupied by the active flood plains of the Indus, the Jhelum, and the Chenab, totalling 1.18 million acres. Relatively small areas of meander flood plain cover 0.87 million acres west and south of Trimmu and in Muzaffargarh District. A narrow piedmont plain containing