I. INTRODUCTION

Important irrigation enterprises are found on every continent on the face of the earth. Among the more notable ancient irrigation undertakings were those of Egypt, Iraq, China, Peru, and Mexico. The extensive irrigation works in these areas reflected the technical and administrative ability of the civilizations they served and, in turn, were instrumental in the development of the economy and social life of these areas. The early civilizations in the arid margins and the humid regions of the world, where life depended on irrigated rice, grew in wealth, cultural achievement, population, and power as their irrigation systems were extended and as long as the productivity of the irrigated lands remained high. Salinization of the irrigated soils, silting of canals, and administrative neglect often, though at times almost imperceptibly, reduced the productivity of irrigation systems and adversely affected the nations depending on them.

Today, almost 7,000 years after the beginning of irrigated agriculture in Mesopotamia, irrigation systems continue to be built with increasing technical complexity and in areas never before irrigated. Although most of these systems are being built in countries not as entirely dependent on their irrigation systems as were the early hydraulic civilizations, they are, nevertheless, endeavoring to better the economic conditions, and failures in these irrigation systems may seriously retard a country’s economic and social development. The present level of agricultural, engineering, and administrative skills and knowledge of the social and economic milieux of irrigation systems that can be brought to bear on design and operation should make complete failure, or even the partial failure, of a project unlikely. Partial successes or failures of projects, however, do occur. The continued improvement of technical skills and the improvement in our knowledge of the social aspects of projects can improve the likelihood of success and continue to increase the productivity of irrigated lands.

II. INSTITUTIONAL CORRELATES OF IRRIGATION DEVELOPMENT AND DECLINE

In both the Old and the New World where agriculture evolved from dry farming to small-scale irrigation developments and then occasionally into regional irrigation systems, changes occurred in the societies as they developed their irrigation systems (see Steward, 1955 and Stamp, 1961). These changes in the economy and culture of a region were often necessary precursors of the further development of complex irrigation systems.