

## CHAPTER I

### INTRODUCTORY

Floods are amongst the most destructive forces of nature causing enormous damage to crops and property as well as loss to human life and cattle heads. The after-effects of the floods are also disastrous as the damaged property is to be repaired and health-hazards are to be fought. Floods have been as ancient as the existence of man on this planet. In ancient times the management of floods involved both adaptation of man's way of life to the ways of his river and storage of flood water for irrigation.

In earlier times the local interests were responsible for flood control and flood protection measures. In fact, at that stage the society was not so developed and the impact of everything including natural calamities like floods was local in character. With the growth of scientific and technological developments and the faster means of transport and communications, the society has become more integrated and repercussions of the local events have begun to be felt at the national and international levels. Again, with this scientific and technological renaissance the industrial fibre of the society started concentrating at one place. Consequently, the loss by floods in the same area increased with the increase of industrial concentration. The gigantic flood losses affected the national economy, and, national interest demanded that the federal governments should take active interest in the control of floods. The change of political ideology from *laissez-faire* to welfare state, though quite recent, may also be considered as one of the reasons for attracting the national interest in the control of floods.

India has always been a victim of natural calamities such as droughts, earthquakes and floods. The vast country with varying geographical phenomena experiences droughts in one part, where crops costing thousands of rupees are destroyed, besides loss to cattle heads and human life, and devastating floods in other parts of the country. India in fact is traversed by many big and small rivers and floods of varying intensities in one or other part of the country have become almost endemic. Year after year there is extensive damage to standing crops and property. The inundation renders tens of thousands homeless. Statistics of flood damage during the period 1953-65 show that on an average, an area of 60.73 lakh hectares (150 lakh acres) is affected every year of which about a third is

crop land. The total direct and indirect loss due to floods is estimated about 100 crore rupees annually.<sup>1</sup> Further, it is not the same area which gets subjected to floods each year ; the area varies. Certain states such as Assam are more vulnerable to floods than others.

The disastrous floods of the 1950s led to the union government taking positive measures for flood control and treating the flood problem as a national problem. In fact, many a multi-purpose river scheme originated in order to combat flood problems of the area. Interstate river schemes such as the Damodar Valley Project on the Damodar River, the Hirakud on the Mahanadi in Orissa and the Kosi in Bihar were originally planned to provide means of controlling floods. Other water uses such as irrigation and generation of hydro-electric power were made part of the schemes in the interest of multi-purpose development of water resources and to make them more productive and economical. Beginning from the First Five Year Plan, each successive Five Year Plan has been providing increased outlay for flood control measures.<sup>2</sup> Among the various flood protection measures, the most commonly employed are the construction of reservoirs on the rivers with provisions for flood moderation, embankments and channel improvements with its various forms such as channel clearance, straightening the channel, cut-offs which reduce the length of the channel giving it a steeper grade for lower flood heights *etc.*<sup>3</sup> These methods are aimed at physically controlling floods by reducing flood heights and/or areas of overflow and of checking bank erosion. There are in addition other methods the main purpose of which is to reduce or redistribute the flood losses. There are : (i) evacuation of people and property from areas subject to frequent and recurring floods (ii) flood plain zoning (iii) flood warning and prediction system and (iv) flood insurance. Of these, flood plain zoning and flood insurance have not so far been adopted in India.

Rivers do not respect state boundaries ; so also floods. Therefore, in order to control floods in an interstate river two or more states through which the river flows may be required to initiate action jointly. The best possible means of securing cooperative action is by agreements among the states concerned. In the absence of agreement, the question arises whether the union government on its own could initiate flood control measures on interstate rivers. This brings into focus the issue of legislative competence

1. P. N. Kumar, "Flood Control in the Three Plans," XIII *Bhagirath* 116 (1966).

2.		<i>Rs. in crores</i>
	First Plan	13
	Second Plan	48
	Third Plan	82
	1966-67	14
	1967-68	13
	1968-69	14

*Report of the Ministry of Irrigation and Power (1968-69) 39.*

3. For a description of these methods see, I Government of India, Ministry of Irrigation and Power, *Report of High Level Committee on Floods 54-56 (1957).*

of the union as well as the states for undertaking flood control measures on the rivers in India. There is also the question of the constitutionality of various flood relief measures under the different provisions of the Constitution. Further, it is necessary to examine the Indian laws on the subject and their deficiencies to meet the situation.

The study has seven chapters. The second chapter surveys flood control measures undertaken in the United States of America. In particular, it examines the powers of the federal government under the United States Constitution to solve flood problem, the steady growth of the federal power over flood control by means of various federal legislative enactments, the federal executive organizations in charge of flood control measures, the different methods of flood control such as construction of levees, reservoirs, flood plain zoning and the constitutional and legal validity of such flood control measures. The third chapter involves a discussion of the legislative competence of the union and the states in India to legislate on flood control. It discusses the feasibility of a union legislation on flood control. The fourth chapter deals with one aspect of flood control, namely, flood plain zoning and examines the constitutional validity with special reference to articles 14 and 19 of the Constitution of India. The fifth chapter examines flood control methods involving state acquisition of private property for such works as construction of levees, embankments, reservoirs *etc.*, and its constitutionality with reference to articles 14, 19 and 31 of the Constitution of India. The sixth chapter is a survey of existing state legislation in the various states of India on flood control and their evaluation. The seventh and last chapter incorporates the suggestions for a Model Bill on flood control by the union.