

Dimensions of the Problem

The development, management and settlement of disputes pertaining to water resources; such as rivers, lakes, springs, waterways, waterfalls and aqueducts, at the international as well as inter-state level, create not only legal but also social, economic and political problems for the concerned states or countries as units of international community or provinces etc., as units of a federal polity, as the case may be. In order to solve these problems a complex body of rules, regulations, Acts, judicial decisions, agreements, customs and state-practice are emerging in this regard, which, for the sake of brevity, is termed as 'Water Resources Law'.

It has already been pointed out that as the concept of "optimum utilisation" of water resources is gaining ground the research in various fields of water resources law is also acquiring significance simultaneously. In case of India, at the international level, such research in the field of water resources law has to confront and provide material for tackling problems arising in relation to its neighbouring countries, namely, Pakistan, Nepal and Bangladesh. At the inter-state level it has to grapple with the problems creating tensions and strains in the mutual dealings of the units of the Indian federation and their respective people.

In order to facilitate a conceptual understanding pertaining to the co-related issues and problems touching the field under review, the present study will examine the the concepts of 'international rivers', 'international drainage basin' and 'international water resources systems' along with the conceptual connotations of the expressions 'dispute', 'international disputes', 'international water disputes' and 'inter-state water disputes'.

Thereafter, it is planned to examine the theories invoked at the time of settlement of water disputes or sharing of water resources at international as well as inter-state level. While looking into the clash of various conflicting theories in the struggle for assertion of claims and establishment of the superiority of one theory over the other, various concepts or theories are to be examined. In the field of water resources law there are thinkers, writers or researchers, who display a tendency to depict the ideal law of their subjective imagination and belief as the prevailing law. In order to discourage and curb such a tendency it is necessary to lay down a clear distinction between the two distinct sets of juridical norms, namely, *de lege lata (lex lata)* and *de lege ferenda (lex ferenda)*, or to put in simple terms 'law as it is' and 'law as it ought to be'. After that, various concepts or theories such as 'the doctrine of riparian rights', 'the prior appropriation theory', 'the territorial sovereignty theory', 'the natural water flow theory', 'the equitable apportionment theory' 'the community of interest theory' and 'the equitable utilization theory', -the last one being development oriented, will be thoroughly and objectively examined as well as evaluated.

After dealing with the theories it will be worthwhile to have a look into the basic substantive problems involved in sharing water benefits. Amongst these

problems, the problems of preservation and restoration of the quality of water falling in the share of the respective contestant state, and the problem of the conservation of one's water potential, come into play in the post-dispute-settlement era. But other ones, like the problem of laying down the order of priority for various uses of water, the problem of the determination of the exact quantum of share of the respective contestant state as also the question of conceptualization and identification of factors for determination of the respective water share of the contestant states, come up as the burning questions during the time of the dispute itself. Thus, the analysis and evaluation of the factors relevant for distribution of the contested waters of the concerned international and inter-state water resources, with specific emphasis on rivers, assumes significance. The factors planned to be examined and evaluated in the present work include legal factors as well as equitable factors.

Further, the search for sources of law for settlement of international water disputes will include an examination of juristic works comprising early twentieth century works as well as recent works. The contributions, in this regard, of the Economic Commission for Europe in 1952 and those of the European Economic Community will also be analysed. This analysis will be supplemented with the evaluation of the works of the Non-official Organizations, with specific reference to the work done, in this context, by the International Law Association (I.L.A.). Further, the Helsinki Rules, adopted by I.L.A. in 1966, deserve a special place in this analysis. The contribution of the Official Organizations in the form of source material collected by the Food and Agriculture Organization of the United Nations and the works of the International Law Commission, is also contemplated to be examined here. This will be followed by an analysis of the judicial decisions arbitral awards as well as other miscellaneous source material, in search of the sources of law in the field under study.

After this conceptual analysis, while confining to the international arena, the international water law disputes in India with her neighbouring countries will be examined and evaluated. This part of the present treatment will encompass the survey and critical evaluation of India's water disputes with Pakistan and the tackling of problems and controversies with Nepal and Bangladesh. The issue of exploitation of water resources of the Brahmaputra—the problematically unproblematic river, will also be scrutinized. The water resources kept in view for the purpose of this study comprise only rivers and lakes.

While coming face to face with the problems concerning inter-state rivers, the present work first plans to give a brief description of the main basins and river systems in India. This will, to be precise, include the description of the rivers of Indus Basin, Ganga Basin, Cauvery (Kavery) Basin, Mahanadi River System, Narmada River System, Mahi River System, Tapi River System, Periyar River System, Damodar River System, Yamuna River System, Palar River System, Bharathapuzha River System, Brahmaputra River System, Indravati River System, and Pennar River System.

Then by way of historical survey, the work contemplates to examine the position of India's inter-state (inter-provincial) rivers before and just after the 15th of August, 1947. In this context, treating the Government of India Act, 1935 as one important milestone, it will be purposeful to examine this position separately as

it prevailed prior to the Government of India Act, 1935 and as it underwent a change effected by provisions of the said Act of 1935.

For having a clear and purposeful insight into developments prior to the 1935 Act. in this regard, it will be advisable to start the scrutiny of the situation as it prevailed at the point of time of the Charter Act of 1833. Thereafter the situation as regulated, in this connection, by the Charter Act of 1853 and the Government of India Act of 1858, will be examined. In the post-1858 Act era, the provisions of the Northern India Canal and Drainage Act of 1873 deserve a special attention for its critical evaluation. In the twentieth century, the Government of India Act, 1915-1919 was also a milestone since the Devolution Rules adopted under the scheme of that Act proved to be the forerunners of the provisions of the Government of India Act, 1935, touching regulation of water resources and inter-provincial water disputes.

The problems and disputes of the inter-provincial rivers in India, under the provisions of the Government of India Act, 1935, are to be examined by keeping Indus Rivers as a model, which were tackled by the Indus Commission or Rau Commission, named as such after its chairman, B.N. Rau, and those of the rivers crossing the provinces of British India on the one hand and the princely states on the other, are planned to be scrutinized treating Cauvery (Kavery) river as a model. The problems of rivers crossing princely states, if any, will also be subjected to an analysis. A brief mention of the pertinent deliberations at the stage of drafting of the Constitution of India will also find a place in the present analysis. A reference to the allied "river valley concept" which got inducted in the water law corpus of the new Constitution era, will also be beneficial for understanding the 'basin concept' approach.

The analysis of the position after the coming into operation of the Constitution of 1950 will include an evaluation of the relevant provisions of the Constitution of 1950, including, inter alia, the provisions with reference to the administration of the inter-state rivers. Light will also be thrown on the provisions envisaging and depicting the possibility of changes in the position and identity of the existing inter-state rivers. The relevant statutory measures such as the River Boards Act, 1956 and the Inter-State Water Disputes Act, 1956 shall also be duly examined.

The relevant source material in the search of sources of law pertaining to the settlement of inter-state water disputes in India, as drawn from the standard works of the distinguished publicists, statutory provisions, reports of commissions, judicial decisions and awards of Tribunals and the inter-state agreements as well as inter-state practice will be properly scrutinized and sifted.

In order to supplement the effect and utility of this source material the state-practice of some model federal systems such as prevailing in Argentina, Australia, Canada, Federal Republic of Germany, Switzerland, U.S.A. and U.S.S.R. as also that of some non-federal polities, dealing with their interzonal or inter-regional disputes, shall also be examined and utilized as help material. These polities have been picked up with a view to examining the state practice of some representative federal and non-federal patterns.

While tackling the actual problems, in the form of evaluation of concrete inter-state water disputes in India, the present work plans to touch Krishna River Water Dispute, Narmada River Water Dispute, Godavari River Water Dispute

Punjab-Rajasthan-Haryana Water Dispute, Cauvery(Kavery) Water Dispute and some minor Water disputes such as Tungabhadra River Water Dispute, Palar River Water Dispute, the Musakhand Dam project problem and the Bajaj Sagar Dam project problem. The study in hand will also touch the issue of the correlation of the inter-state water disputes in India with central control over management of water resources installations for the purpose of environmental protection.

The work intends, then, to make an attempt to have a broader appraisal of the problem of inter-state water disputes in India by not only examining the issues touching principles of law, equity and state practice in this regard but also by highlighting the social, economic and political effects of these disputes and their respective awards, including the qualitative changes brought about, regarding these effects, by the respective awards. The pertinent hard law provisions will be examined alongwith their policy implications. The present study will also undertake the cost-benefit analysis of the major inter-state water disputes in India.

Finally, the work will also venture a qualitative analysis and evaluation of the present 'dispute-management-model, examining, *interalia*, its present structure, suitability and the advisable modifications, if so needed.

In the course of the qualitative evaluation of the present prevailing 'dispute-management model' one highly significant aspect to be emphasized and examined is the identification of causes for delay in the settlement of these disputes so that efforts could be made to remove the same. It has been noticed that when such disputes remain unsettled there is scarcity and non-availability of water required for various uses, including, even domestic use. Technically it is claimed that the concerned contestant states do not get water for use during the period of pendency of the disputes and that as such the development suffers. However, the consumers, namely, the inhabitants of the concerned disputant states, are virtually the real sufferers. Taking the case of requirement of water for domestic use, amongst consumers also, it is the women who suffer more as in the rural areas, traditionally the women are entrusted with the job; of fetching water. Because of the non-availability of water at hand, women have to travel to distant places to procure water and carry it on their heads for long distances. Such a situation brings in the element of suffering of women and hence the need for making efforts for rendering justice to rural women.