

CHAPTER – 3

INTERSTATE ASPECTS

3.1 Rivers and the Ken-Betwa link

The Ken river is an interstate river between Madhya Pradesh and Uttar Pradesh with a catchment area of 28,058 sqkm, out of which 24,472 sqkm (i.e. 87.22%) lies in Madhya Pradesh and the remaining 3586 sqkm (12.78%) in Uttar Pradesh. The river is the last tributary of Yamuna before it joins the Ganga. Out of its total length of 427 km, 292 km lies in Madhya Pradesh and 84 km in Uttar Pradesh and the remaining 51 km forms a common boundary between Madhya Pradesh and Uttar Pradesh.

Betwa is also an interstate river between Madhya Pradesh and Uttar Pradesh that rises in the Raisen district of Madhya Pradesh and flows through northeasterly direction across the Jhansi district of Uttar Pradesh. Out of the total catchment area of 43895 sqkm, 30217 sqkm (i.e. 68.84%) lies in Madhya Pradesh and the rest 13678 sqkm (31.16%) in Uttar Pradesh. The total length of the river from its origin to its confluence with Yamuna is 590 km, out of which 232 km lies in Madhya Pradesh and the balance 358 km in Uttar Pradesh.

Ken-Betwa link, proposed for transferring balance water of Ken river to Betwa river, will traverse through these two states. Out of the total length of 231.45 km, the length of the canal in Uttar Pradesh portion is only 18 km and the rest is in Madhya Pradesh.

3.2 Interstate agreement on sharing of Ken water

Since the river Ken is an inter-state river between Madhya Pradesh and Uttar Pradesh, agreements were arrived at Rangawan dam in the year 1972, on Ken canal and head works of Uttar Pradesh and Bariarpur left bank canal of Madhya Pradesh and on Urmil project in the year 1977. In the meeting with Secretary, Irrigation, Government of India held at New Delhi on 10.12.81, it was decided that an upstream use of 80 TMC should be kept for the proposed Ken Multi-purpose Project.

The abstract of water use allocations as per the agreements and decision indicated above, is as follows :

Table – 3.1

Ken system	Mm³	TMC
Total 75% dependable yield at Ken dam	4489.94	158.56
Water use by M.P. u/s of Ken	2265.60	80.00
Water use by M.P. ex-Ken	1375.22	48.56
Water use by U.P. ex-Ken	849.60	30.00
Total 75% dependable yield at Rangawan dam	192.57	6.80
Use by M.P. for Kharif crops Existing water use by M.P.	56.64	2.00
U/s of Rangawan dam	30.87	1.09
Use by M.P. from the balance water	8.78	0.31
Use by U.P. from the balance water	96.29	3.40
Water available to U.P. from the catchment between Ken, Rangawan dam and Bariarpur barrage	101.95	3.60
Total water to be spared to U.P. from Ken system	1047.84	37.00
Urmil dam agreement		
Total 75% yield at Urmil	94.87	3.35
U/s use by M.P. @ 20%	18.97	0.67
Use by M.P. from the balance water @ 60%	45.60	1.61
Use by U.P. from the balance water @ 40%	30.30	1.07
Total water available to M.P.	64.57	2.28

3.3 Water availability

The issue of yield of Ken river at Greater Gangau dam site was discussed in the 18th Technical Advisory Committee meeting of NWDA held on 10.3.93. In that meeting, the Chairman, TAC informed that the yield studies carried out by NWDA using runoff data of CWC at Banda gauge and discharge site had been reviewed by CWC and found to be in order. Accordingly, the virgin yield of 6188 Mm³ at Greater Gangau assessed on the basis of runoff data at Banda site has been accepted by the TAC of NWDA.

3.4 Submergence

The total area under submergence at MWL of 288 m and FRL of 287 m comes to 9000 ha and 8650 ha respectively. The entire submergence area lies in Madhya Pradesh. Details of submergence have been worked out at the MWL of 288.0 m. It has been assessed that about 10 revenue

villages of Chhatarpur and Panna districts having population of about 8550 numbers would come under submergence of Daudhan reservoir. Details are given in the Chapter-7 on Reservoir. As the entire submergence area lies in Madhya Pradesh, a majority of the oustees would be settled in Madhya Pradesh. The detailed study on survey and investigation for rehabilitation & resettlement of families would be carried out and incorporated at the time of preparation of the detailed project report.

3.5 Irrigation benefits

Out of the total enroute culturable command area of 47000 ha, 39950 ha lies in Madhya Pradesh and remaining 7050 ha lies in Uttar Pradesh. The land to be acquired for the canal shall be about 2135 ha in Madhya Pradesh and 180 ha. in Uttar Pradesh. Care has been taken while aligning the canal in the fields so that it does not pass through the habitant areas to minimise the impact of rehabilitation due to project.

The proposed Ken-Betwa link project is an important major irrigation-cum-power project for Chhatarpur and Panna districts of Madhya Pradesh. This will be a major leap forward towards the integrated development of the lower zone of Ken valley as well as upper reaches of Betwa. Since this project would also achieve the objective of the proposed Ken Multi-purpose Project, the existing Beniganj, Urmil and Rangawan projects alongwith the Bariarpur left bank canal can be coordinated while providing irrigation to an area of 3.23 lakh ha annually as proposed in Ken Multi-purpose Project of Madhya Pradesh.

3.6 Need for fresh inter states agreements

The transfer of Ken water to Betwa which substitutes the water to be utilised through the proposed four projects in upper reaches of Betwa sub-basin will add a new dimension to the interstate aspects between Uttar Pradesh and Madhya Pradesh. In view of this, there is a need for fresh interstate agreement on Ken between Madhya Pradesh and Uttar Pradesh. This agreement may cover water use of Madhya Pradesh upstream of Daudhan, water use by Uttar Pradesh ex-Daudhan and water use by Madhya Pradesh ex-Daudhan etc. There is also a need for agreement between Madhya Pradesh and Uttar Pradesh on Betwa river, which can cover use of water that will reach Parichha weir from Ken-Betwa link. This agreement should clearly indicate that 659 Mm³ water will be utilised in upper Betwa sub-basin by substitution to irrigate 1.27 lakh ha areas annually.