

Assessing water allocation strategies in the Krishna River basin, South India

LUNA BHARATI¹, B. K ANAND², KAUSHAL GARG³ & SREEDHAR ACHARYA³

¹ *International Water Management Institute (IWMI), Department of Irrigation, Room 427&428, Jawalakhel, Lalitpur, Nepal*

lbharati@cgiar.org

² *IWMI, New Delhi Office, India*

³ *IWMI, Hyderabad Office, India*

Abstract Water allocation rules are put into place to ensure that various parties receive a portion of developed water supplies. In the Krishna basin, India, all the water available is fully allocated to some purpose for a large part of the year. Over 90% of the allocated water is for irrigation. However, due to increasing demands from the domestic and industrial sectors, as well as expansion in irrigation areas, there is growing competition between the different water use sectors, as well as the three riparian states that share the Krishna basin. In this study, the WEAP (Water Evaluation and Planning) model is used to assess two case studies in which the implications of two separate water transfer schemes are analysed. The first case study presents the feasibility of a proposed water transfer scheme from the Godawari River at the downstream part of the Krishna River. The second case study presents analysis from the Upper Bhima catchment in the upstream part of the Krishna basin. In the second case study, the impact of water transfer out of the basin for electricity generation, on downstream agricultural water demands, is analysed. Results from both studies stress the fact that water resources management in the region has to be done on a seasonal basis by taking monthly variability into consideration. In both cases, water scarcity occurs during the critical dry months.

Key words water transfer; water allocation; Krishna River basin