1. Record Nr. UNINA9910785584603321

Autore	Bhattacharyya Kumkum
Titolo	The Lower Damodar River, India [[electronic resource]] : Understanding the Human Role in Changing Fluvial Environment / / by Kumkum Bhattacharyya
Pubbl/distr/stampa	Dordrecht : , : Springer Netherlands : , : Imprint : Springer, , 2011
ISBN	94-007-0467-4
Edizione	[1st ed. 2011.]
Descrizione fisica	1 online resource (321 p.)
Collana	Advances in Asian Human-Environmental Research, , 1879-7180
Disciplina	551.483095414
Soggetti	Hydrogeology Water pollution Physical geography Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution Physical Geography
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1.Introduction -- 2. Damodar Valley Region -- 3. Floods and Water Resource Management in a Tropical River, the Damodar -- 4. The Reservoired Lower Damodar: Hydro-Geomorphic Perspective -- 5. Colonization Processes in the Damodar Riverbed -- 6. Controlled Lower Damodar: Social Perspective -- 7. The Controlled Lower Damodar: A Product of Hydrogeomorphic and Anthropogenic Processes -- 8. Towards Better Interaction -- References -- APPENDIX I. Model questionnaire of perception survey -- APPENDIX II. List of reference maps -- APPENDIX III. Hydrological observation -- APPENDIX IV. Information about Maithon and Panchet Project.-APPENDIX V. Streamflow of the Damodar River at Rhondia -- APPENDIX VI. Streamflow of the Damodar River at Damodar Bridge Site -- APPENDIX VII. Inflow into Durgapur Barrage and canal consumption -- APPENDIX VIII. Volume of water released down the Durgapur Barrage and canals -- APPENDIX IX. Combined moderation by Maithon and Panchet dams of the Damodar River -- APPENDIX X. Peak flow of the Damodar River, Rhondia -- APPENDIX XI. Average monsoon discharge and suspended sediment of Damodar at Damodar Bridge Site -- APPENDIX XII. GIS as a

toolbox for flood, water & land resource planners.

Sommario/riassunto

Interweaving the human aspects of river control with analysis of hydro-physical data, including historical data over the last few centuries, this monograph is a comprehensive evaluation of the Damodar’s lower reaches. While the Damodar River isn’t an exceptional tropical river, nor does it feature classic examples of river control structures, it is unusual and worthy of study due to the fact that nowhere else in the tropical world have riverine sandbars been used as a resource base as well as for permanent settlements. Based on their knowledge of river stages, the inhabitants have fine-tuned their land use to flood events, applying a concept of flood zoning to the riverbed. Every available space has been utilized rationally and judiciously. This rare human-environmental study analyzes the remarkable way in which immigrants unfamiliar with the riverine environment have adapted to the altered hydrologic regime of the river. In doing so they have demonstrated a sophisticated understanding of the flood regime and the vagaries of an unpromising environment in their land use, cropping and settlement patterns. Spurred on by restricted social and economic mobility and sometimes political constraints, these self-settled refugees have learned to adapt to their environment and live with the floods. Bhattacharyya’s text is particularly timely, as anthropogenic processes of this kind have not been adequately studied by geographers. "Bhattacharyya's superb study describes and analyzes the interrelationship of geomorphic setting, resource base, perceived environment and social space as well as the role of legal structures, economic geography and infrastructure in accounting for the way society has adapted to, altered and utilized a once natural dynamic environment. Through historical reconstruction of the riverine scene along with marshalling of data on river behavior and social change, including the presentation of detailed studies of settlements within the alluvial bottomland brought to life with excellent maps, the author makes clear how people, ranging from refugees to local settlers have transformed the landscape driven by diverse cultural, economic, religious, and political forces. The author's description of the sophisticated way in which environment, social status, and culture are interwoven in the distribution of crops and associated microtopography is masterful". (Prof. M. Gordon Wolman, Department of Geography and Environmental Engineering, The Johns Hopkins University, Baltimore, MD, USA).