

Journal of Indian Geomorphology
Volume 1, 2012
ISSN 2320-0731

Managing Editor

Savindra Singh

Editor

Sunando Bandyopadhyay

Associate Editors

Manmohan Kaul (for 19th IGI articles) and
Subhamita Chaudhuri

Editorial Advisory Board

N. Chandrasekar
Rajinder K. Ganjoo
Sunil Kumar De
Veena U. Joshi

Reviewers for this issue

Abhijit Chakraborty
Amal Kar
Guruprasad Chattopadhyay
Manjari Bhattacharji
Santanu Pattanayak
Subhamita Chaudhuri
Sunil Kumar De
Suresh Ramchandra Jog
Veena U. Joshi

ISSN 2320-0731

Journal of Indian Geomorphology

Volume 1, 2012



Indian Institute of Geomorphologists (IGI)



acb publications

P757 Block A, Lake Town, Kolkata 700089

A New Beginning, at 25 Years

On the occasion of Silver Jubilee of our organisation, we feel privileged to release the first volume of the *Journal of Indian Geomorphology* – a new series of journal from the Indian Institute of Geomorphologists. It is unfortunate that the *Indian Journal of Geomorphology*, which had a long and chequered history, had to be discontinued after the 16th volume due to some unavoidable reasons. However, keeping in mind the spirit of our institute and our goal to highlight the current trend of research in Indian Geomorphology, we firmly believe that this new series of the journal would be equally successful.

The aim of the *Journal of Indian Geomorphology* will be to maintain good academic standards supported by decent production quality. The backbone of any scientific journal is the quality of the research articles; and we sincerely hope that the journal will be enriched by articles from the senior geomorphologists of our fraternity as well as from the young researchers.

Let this be a new beginning to our pursuit towards perfection.

CONTENTS

Emerging Fields in Geomorphology: The Future Challenge R.K. Ganjoo	1
Processes, Status and Vulnerability of Desertification with Reference to India H.S. Sharma	6
Morphotectonic Evolution of a Part of Kangra Reentrant, Northwestern Himalayas Umakant Sharma and Ravindra Kumar	19
Impact of Climate Change on River Discharge: A Case Study of Birhun Khad, Tawi Basin, Jammu R.R. Sharma	26
The Tista– Jaldhaka Interfluve, Jalpaiguri District, West Bengal: Geomorphology and Landuse Mery Biswas	32
Types, Distribution and Morphology of Aeolian Bedforms in Canal-irrigated Region of Arid Western Rajasthan P.C. Moharana	38
Topographic Features of the Gumani River Basin, Rajmahal Volcanic Province, Jharkhand: An Example of Exhumed Topography or Palaeotopographic Control? Manjari Bhattacharji	45
Morphotectonic Evolution of Mahan Drainage System in Son Trough Region of Vindhyanchal - Baghelkhand South, Madhya Pradesh Anamika Agnihotri	55
Geomorphology and Palaeoenvironmental Characteristics of Quaternary Sediments of Purna River Basin, Maharashtra Md. Babar	68
Landslide Hazard Zonation in Raigad District of Maharashtra: A Multivariate Approach Shrikant Karlekar	75
Depositional Activities of the Lower Bhogdoi River: Jorhat District, Assam Mrinal Nath and A K Bora	83
River Bank Erosion Hazard in the Dalgaon Revenue Circle of Assam Rana Sarmah	91

Bank Erosion of the Brahmaputra River in the Downstream of Palasbari and Soalkuchi, Kamrup District, Assam	103
Kishore Kumar Bharali and Santanu Sarma	
Assessing the Necessity of Watershed Management at Sundra Basin, Paschim Medinipur, West Bengal	107
Sumanta Prakash Shee and Ramkrishna Maiti	
Hydro-morphological Interpretation Using Morphometric Techniques: A Study on Dwarka River Basin, Jharkhand and West Bengal	115
Swades Pal	
Assessment of Morphometric Characteristics of Chittar River Basin, Thiruvananthapuram District, Kerala: A Remote Sensing and GIS Based Study	127
Bindu G., Neelakantan R. and Rajesh Reghunath	
Evaluation of the Hydraulic Stability of Tidal Inlet: A Case Study of the Shrivardhan Inlet-Bay System, Konkan Coast	133
Subhamita Chaudhuri	
Geomorphology of Southern Coastal Plain of Andhra Pradesh: Processes, Landforms and Hazards	148
K. Kameswara Rao and B. M. Shah	