JOURNAL OF BANGLADESH INSTITUTE OF PLANNERS VOLUME 15, DECEMBER 2022

Editor K.M. Maniruzzaman



Planners' Tower (Level-7) 13/A, Bir Uttam C. R. Datta (Sonargaon) Road Bangla Motor, Dhaka-1000 Bangladesh

JOURNAL OF BANGLADESH INSTITUTE OF PLANNERS Volume 15, December 2022

Editorial Board

Editor

K.M. Maniruzzaman Professor, Imam Abdulrahman Bin Faisal University, Saudi Arabia

Members

M. Shafiq-Ur Rahman Professor, Jahangirnagar University

Md. Musleh Uddin Hasan Professor, Bangladesh University of Engineering & Technology

A. K. M. Abul Kalam Professor, Jahangirnagar University

Ishrat Islam Professor, Bangladesh University of Engineering & Technology

Kazi Saiful Islam Professor, Khulna University
Golam Moinuddin Professor, Jahangirnagar University

Mustafa Saroar Professor, Khulna University of Engineering & Technology

Bhuiyan M. Alam Professor, The University of Toledo, USA
Tasleem Shakur Professor Emeritus, University of Sheffield, UK
Charles Choguill Professor Emeritus, University of Sheffield, UK

Ahsanul Habib Director, Dalhousie University, Canada

Sharfaraz Gani Adnan
Research Fellow in Multi-hazards, University of Strathclyde Glasgow, UK
Raktim Mitra
Associate Professor, Toronto Metropolitan University, Canada
Kh. Md. Nahiduzzaman
Assistant Professor, The University of British Columbia, Canada
Ismaila Rimi Abubakar
Assistant Professor, Imam Abdulrahman Bin Faisal University, Saudi Arabia

Mohammad Shahidul Hasan Swapan Senior Lecturer, Curtin University, Australia

Executive Editor

Md. Rejaur Rahman Board Member, Bangladesh Institute of Planners

Assistant Editor

Nazia Hossain Asst. Professor, Rajshahi University of Engineering & Technology Farzana Faiza Farha Lecturer, Bangladesh University of Engineering & Technology

The editorial board assumes no responsibility for opinions and statements so presented by the contributors in their respective write-ups.

Price: Tk. 200.00 (individuals) US \$ 25.00

Tk. 250.00 (institutions) US \$ 30.00

Printed by

Saleha Graphics & Printing

Shop #117, Block #C, Hazrat Bakusha Market, Nilkhet, Dhaka-1205

Contact: 01722165168

© Bangladesh Institute of Planners (BIP)

ISSN: 2075-9363

Journal of Bangladesh Institute of Planners is published annually by the Bangladesh Institute of Planners (BIP), Planners' Tower (Level-7), 13/A, Bir Uttam C.R. Datta (Sonargaon) Road, Bangla Motor, Dhaka-1000, Bangladesh