



# **SUSTAINABLE CIVIL INFRASTRUCTURE DEVELOPMENT: CASE STUDIES**

**(Second Edition)**

*Edited by*

**SUDIP BASACK  
GHRITARTHA GOSWAMI  
JOYDEEP DUTTA  
M K LOGANATHAN**

**Title of the Book:** Sustainable Civil Infrastructure Development: Case Studies

**Second Edition:** 2024, IIP Series

**Copyright © 2024 Authors**

No part of this book may be reproduced or transmitted in any form by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owners and publisher.

**Disclaimer**

The authors are solely responsible for the contents published in this book. The publisher or editors do not take any responsibility for the same in any manner. Errors, if any, are purely unintentional and readers are requested to communicate such errors to the editors or publishers to avoid discrepancies in future.

**ISBN: 978-93-6252-138-5**

**MRP: 1,710/-**

**Publisher, Printer & Distributor:**

Selfypage Developers Pvt. Ltd.,  
Pushpagiri Complex,  
Beside SBI Housing Board,  
K.M. Road Chikkamagaluru, Karnataka.  
Tel.: +91-8861518868  
E-mail: info@iipseries.org

**IMPRINT: IIP Iterative International Publishers**

**For Sales Enquiries**

Contact: 91- 8861511583  
E-mail: sales@iipbooks.com

## Chapter 25

# Hydrodynamic Response of an Offshore Floating Wind-Solar-Aquaculture System

**Basu Bhowmick**

Undergraduate student

Department of Civil Engineering

Dr. B.C. Roy Engineering College, Durgapur, India.

Corresponding author's email: shovan.roy@bcrec.ac.in

**Timir Kanti Konar**

Undergraduate student

Department of Civil Engineering

Dr. B.C. Roy Engineering College, Durgapur, India.

**Shovan Roy**

Assistant Professor

Department of Civil Engineering

Dr. B.C. Roy Engineering College, Durgapur, India.

**Koyndrik Bhattacharjee**

Assistant Professor

Department of Civil Engineering

Dr. B.C. Roy Engineering College, Durgapur, India.

**Chanchal Das**

Assistant Professor

Department of Civil Engineering

Dr. B.C. Roy Engineering College, Durgapur, India.

---

### Abstract

This study presents a new concept design combining a solar array with a floating steel fish-farming cage. This combined solar and aquaculture system is intended to utilize the ocean space and water resources more effectively and