

**WATER QUALITY ASSESSMENT WITH REFERENCE
TO SOME HEAVY METALS IN AND AROUND
SHIVAJINAGAR, MAJRI COALFIELDS,
MAHARASHTRA**

**Sustainable Resource
Management:
Key Issues, Opportunities
and Challenges**

Volume - 1

Chief Editor

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Enhanced Research Publications

New Delhi, India

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ISBN: 978-81-351756-0-4

(eBook)

Price: INR 200.00

US Dollar: \$ 50 (Includes Shipping Charges)

Publisher:

Enhanced Research Publications
New Delhi, India

An International Journals and Books Publisher

☎ +91 86076 98989, +91 86849 30049

✉ erpublications@gmail.com

🌐 www.erpublications.com

Typeset By : Einstein Academic Research

Book Available at: www.erpublications.com

www.google.com, www.amazon.in, www.flipkart.com

Branch Office :

ER Publications,

New Delhi - 110059, India

☎ +91 8607698989, +91 8684930049

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CHAPTER - 4

WATER QUALITY ASSESSMENT WITH REFERENCE TO SOME HEAVY METALS IN AND AROUND SHIVAJINAGAR, MAJRI COALFIELDS, MAHARASHTRA

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ABSTRACT

Present study is about the assessment of the contamination levels of the heavy metals in the surface and groundwater along with a provisional attempt to provide remediation in the Shivajinagar and Majri area of the Wardha valley coalfields. Geologically, study area is dominated by the Lower Gondwana rocks. In all, 17 samples were collected to analyse the metals Al, Cd, Cr, Cu, Fe, Pb, Ni, and Zn. All determined radicals except Zn, were above the permissible limit in the surface water and only Cd, Pb and Ni were found above the permissible limit in the groundwater as per Bureau of Indian Standards (2012). On correlation, pH was found to be in negative relationships with the heavy metals. This indicated that the Acid Mine Drainage (AMD) could be the probable cause of the enhanced contamination, which can be mitigated by the limestone drains.