



## Appraisal of Hanna lake water quality assessment, Balochistan, Pakistan

Aamir Alamgir<sup>a</sup>, Moazzam Ali Khan<sup>a,\*</sup>, S. Shahid Shaukat<sup>a</sup>, Omm-e-Hany<sup>a</sup>,  
Owais Iqbal Khan<sup>a</sup>, Salman Zubair<sup>b</sup>

<sup>a</sup>Institute of Environmental Studies, University of Karachi, Karachi-75270 Pakistan, Tel. +92 3003789114, email: aamirkhan.ku@gmail.com (A. Alamgir), Tel. +92 3002454259, email: sherwanis@hotmail.com (M.A. Khan), Tel. +92 3312845478, email: shahid\_shaukat2007@yahoo.co.uk (S.S. Shaukat), Tel. +92 3332174799, email: hany786@yahoo.com (Omm-e-Hany), email: owi\_5\_5@hotmail.com (O.I. Khan)

<sup>b</sup>Department of Geography, University of Karachi, Karachi-75270 Pakistan, Tel. +92 3333193219, email: salman.zubair@hotmail.com (S. Zubair)

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### ABSTRACT

Water quality of rivers, natural lakes, and reservoirs in Pakistan is being degraded rapidly because of indiscriminate disposal of liquid and solid waste. Water quality of Hanna Lake; Balochistan province in Pakistan has been investigated during 2014. A total of 22 samples were collected during summer and winter months. The physicochemical parameters, metals and bacteriological analysis were performed and compared with WHO, guidelines 2011 and NSDWQ (National Standard of Drinking Water Quality, Pakistan). pH, chloride, hardness, nitrate, total dissolved solids (TDS), Na, K, and Zn are well within the permissible limit as per World Health Organization (WHO) guidelines and NSDWQ. The concentration of sulphate, Ni and Pb were relatively higher with respect to WHO guidelines and NSDWQ. As concentration was within the limit as per NSDWQ while it is relatively higher (0.04 mg/l) as per WHO guidelines of (0.01 mg/l). All bacteriological parameters (total coliform, total fecal coliforms and total faecal streptococci) were extremely high from public health stand point that renders the water unfit for human consumption. The continued deteriorating environmental conditions of Hanna lake reflect ignorance from government side that can be mended by consistent supervision, long term management and strict enforcement of environmental laws pertaining to the protection of environmental resources. The present study recommends that priority should be given to monitor the water quality of Hanna lake on long term basis which would be helpful in future planning and management of this important water resource in already water scarce area.

*Keywords:* Hanna Lake; Pollution; Public health; Water scarcity; Water quality

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\*Corresponding author.