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ENVIRONMENTAL RISK STUDIES APPLIED TO URBAN MANAGEMENT OF WATER RESOURCES. CASE STUDY: AZUL, BUENOS AIRES PROVINCE, ARGENTINA

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ABSTRACT

In spite of international efforts in the last decades, access to safe water supply cannot be guaranteed in many regions of the world. As a result, waterborne diseases are the single, most common cause of death throughout the world. In low-income countries, the lack of properly trained human resources and funds are major drawbacks in evaluating the risks to human health from drinking unsafe water, let aside making decisions on how the local water resources are to be managed. This paper presents a simple methodology for evaluating the environmental risk associated with a potentially unsafe water supply. The methodology takes into account the concentration of harmful substances in water, the rate of daily water consumption, the weight of humans exposed (adults and children), as well as the reference dose of each given compound. Simple combinations of these parameters are used to evaluate the risk, with results that can then be converted into risk maps. The methodology has been applied in Azul City, Buenos Aires Province, Argentina, a medium-size town with partial coverage of water supply and sanitation services. Taking the block as the unit area, the results are quite useful to illustrate the potential risk and, eventually, to show the path for much needed preemptive measures by the local authorities.

Reference: Peluso, F., and E. Usunoff; Environmental Risk Studies Applied to Urban Management of Water Resources. Case Study: Azzul, Buenos Aires Province, Argentina, Journal of Environmental Hydrology, Vol. 10, Paper 8, December 2002.

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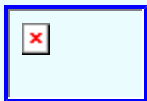
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