

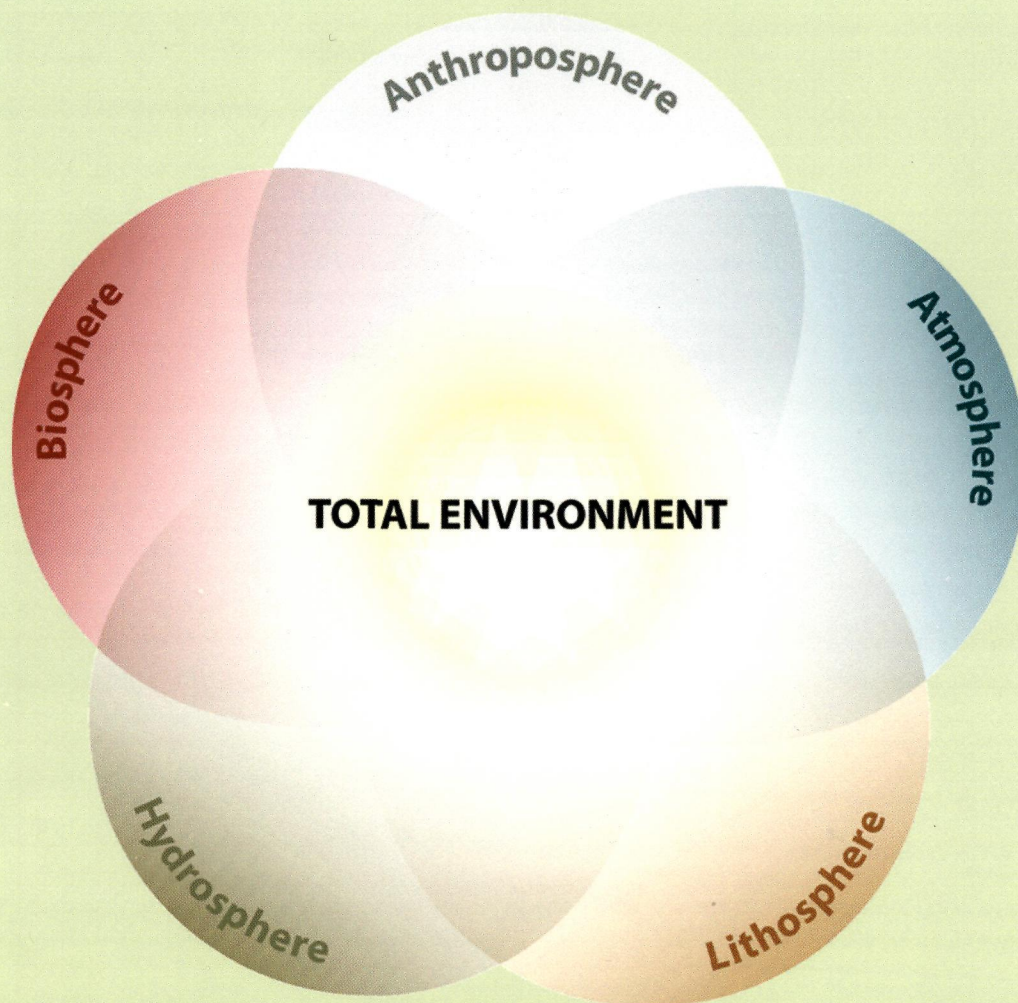
MN
S 40/te

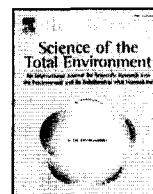


ELSEVIER

Science of the Total Environment

An International Journal for Scientific Research into
the Environment and its Relationship with Humankind





Contents

Development and application of a quantitative PCR assay targeting <i>Catellibacoccus marimammalium</i> for assessing gull-associated fecal contamination at Lake Erie beaches C. Lee, J.W. Marion and J. Lee (United States)	1
Bioaccessibility of mercury in selected Ayurvedic medicines I. Koch, M. Moriarty, J. Sui, A. Rutter, R.B. Saper and K.J. Reimer (Canada, United States)	9
Multivariate study of trace element distribution in the geological record of Roñanzas Peat Bog (Asturias, N. Spain). Paleoenvironmental evolution and human activities over the last 8000 cal yr BP J.L.R. Gallego, J.E. Ortiz, C. Sierra, T. Torres and J.F. Llamas (Spain)	16
Comparing fuel reduction treatments for reducing wildfire size and intensity in a boreal forest landscape of northeastern China Z. Wu, H.S. He, Z. Liu and Y. Liang (China, USA)	30
Pressures at larger spatial scales strongly influence the ecological status of heavily modified river water bodies in Germany J. Kail and C. Wolter (Germany)	40
The effects of triclosan on spore germination and hyphal growth of the arbuscular mycorrhizal fungus <i>Glomus intraradices</i> B.R. Twanabasu, K.J. Stevens and B.J. Venables (USA, Canada)	51
A computational fluid dynamic modelling approach to assess the representativeness of urban monitoring stations J.L. Santiago, F. Martín and A. Martilli (Spain)	61
Relationship of estimated dietary intake of n-3 polyunsaturated fatty acids from fish with peripheral nerve function after adjusting for mercury exposure Y. Wang, J.M. Goodrich, R. Werner, B. Gillespie, N. Basu and A. Franzblau (USA)	73
Fine particulate matter in the indoor air of barbecue restaurants: Elemental compositions, sources and health risks S. Taner, B. Pekey and H. Pekey (Turkey)	79
Modelling temperature effects on ammonia-oxidising bacterial biostability in chloraminated systems D.C. Sarker, A. Sathasivan, C.A. Joll and A. Heitz (Australia)	88
Source apportionment of PM10, organic carbon and elemental carbon at Swiss sites: An intercomparison of different approaches M.F.D. Gianini, C. Piot, H. Herich, J.-L. Besombes, J.-L. Jaffrezo and C. Hueglin (Switzerland, France)	99
The occurrence and distribution of a group of organic micropollutants in Mexico City's water sources T.E. Félix-Cañedo, J.C. Durán-Álvarez and B. Jiménez-Cisneros (Mexico)	109
Effect of monovalent and divalent cations, anions and fulvic acid on aggregation of citrate-coated silver nanoparticles M. Baalousha, Y. Nur, I. Römer, M. Tejamaya and J.R. Lead (United Kingdom, Indonesia, United States)	119
A multi-assay screening approach for assessment of endocrine-active contaminants in wastewater effluent samples C.D. Metcalfe, S. Kleywegt, R.J. Letcher, E. Topp, P. Wagh, V.L. Trudeau and T.W. Moon (Canada)	132
Penguins as bioindicators of mercury contamination in the Southern Ocean: Birds from the Kerguelen Islands as a case study A. Carravieri, P. Bustamante, C. Churlaud and Y. Cherel (France)	141
Discrete mathematical data analysis approach: A valuable assessment method for sustainable chemistry K. Voigt, H. Scherb, R. Bruggemann and K.-W. Schramm (Germany)	149
Fluvial geochemistry in São Miguel Island (Azores, Portugal): Source and fluxes of inorganic solutes in an active volcanic environment P. Freire, C. Andrade, R. Coutinho and J.V. Cruz (Portugal)	154
Differential mercury transfer in the aquatic food web of a double basined lake associated with selenium and habitat M. Arcagni, L. Campbell, M.A. Arribére, M. Marvin-DiPasquale, A. Rizzo and S. Ribeiro Guevara (Argentina, Canada, USA)	170
Comment on "Specific binding of hydroxylated polychlorinated biphenyl metabolites and other substances to bovine calf uterine estrogen receptor: Structure-binding relationships [Kramer and Giesy, Sci Total Environ 1999;233:141–61]" S. Rayne (Canada)	181
Simple to complex modeling of breathing volume using a motion sensor D. John, J. Staudenmayer and P. Freedson (United States)	184
Sediment quality assessment in tidal salt marshes in northern California, USA: An evaluation of multiple lines of evidence approach H.-M. Hwang, R.S. Carr, G.N. Cherr, P.G. Green, E.D. Grosholz, L. Judah, S.G. Morgan, S. Ogle, V.K. Rashbrook, W.L. Rose, S.J. Teh, C.A. Vines and S.L. Anderson (USA)	189
Silicone-based surfactant degradation in aqueous media B. Laubie, E. Bonnafous, V. Desjardin, P. Germain and E. Fleury (France)	199

A flexible Bayesian model for describing temporal variability of N ₂ O emissions from an Australian pasture X. Huang, P. Grace, D. Rowlings and K. Mengersen (Australia)	206
Small-scale variability in peatland pore-water biogeochemistry, Hudson Bay Lowland, Canada T.A. Ulanowski and B.A. Branfireun (Canada).	211
Transfer of metals and metalloids from soil to shoots in wild rosemary (<i>Rosmarinus officinalis</i> L.) growing on a former lead smelter site: Human exposure risk M.-C. Affholder, P. Prudent, V. Masotti, B. Coulomb, J. Rabier, B. Nguyen-The and I. Laffont-Schwob (France)	219
The interactive responses of water quality and hydrology to changes in multiple stressors, and implications for the long-term effective management of phosphorus J. Crossman, P.G. Whitehead, M.N. Futter, L. Jin, M. Shahgedanova, M. Castellazzi and A.J. Wade (UK, Canada, Sweden, USA).	230
An account of the events that led to full bay infilling with sulfide tailings at Portman (Spain), and the search for “black swans” in a potential land reclamation scenario R. Oyarzun, J.I. Manteca Martínez, J.A. López García and C. Carmona (Spain, Chile)	245
Characterisation of the ecotoxicity of hospital effluents: A review F. Orias and Y. Perrodin (France)	250
Maternal Steller sea lion diets elevate fetal mercury concentrations in an area of population decline L.D. Rea, J.M. Castellini, L. Correa, B.S. Fadely and T.M. O’Hara (United States).	277
Population surveys in Greenland 1993–2009: Temporal trend of PCBs and pesticides in the general Inuit population by age and urbanisation P. Bjerregaard, H.S. Pedersen, N.O. Nielsen and E. Dewailly (Denmark, Greenland, Canada)	283
The challenge of sample-stabilisation in the era of multi-residue analytical methods: A practical guideline for the stabilisation of 46 organic micropollutants in aqueous samples O. Hillebrand, S. Musallam, L. Scherer, K. Nödler and T. Licha (Germany).	289
Occurrence of phenols and phenoxyacid herbicides in environmental waters using an imprinted polymer as a selective sorbent E. Herrero-Hernández, E. Rodríguez-Gonzalo, M.S. Andrades, S. Sánchez-González and R. Carabias-Martínez (Spain)	299
A test of the stability of Cd, Cu, Hg, Pb and Zn profiles over two decades in lake sediments near the Flin Flon Smelter, Manitoba, Canada J.B. Percival and P.M. Outridge (Canada).	307
Reproductive health of yellow perch (<i>Perca flavescens</i>) from a biological mercury hotspot in Nova Scotia, Canada K.L. Batchelar, K.A. Kidd, K.R. Munkittrick, P.E. Drevnick and N.M. Burgess (Canada)	319
Monitoring PAH contamination in water: Comparison of biological and physico-chemical tools A. Bourgeault and C. Gourlay-Francé (France)	328
Growth of <i>Populus alba</i> and its influence on soil trace element availability L. Ciadamidaro, E. Madejón, M. Puschenreiter and P. Madejón (Spain, Austria)	337
Simulating near-road reactive dispersion of gaseous air pollutants using a three-dimensional Eulerian model S.H. Kota, Q. Ying and Y. Zhang (USA)	348
Integration of a dynamic organism model into the DynA Model: Development and application to the case of DDT in Lake Maggiore, Italy A. Infantino, M. Morselli and A. Di Guardo (Italy).	358
Dioxin levels in fertilizers from Belgium: Determination and evaluation of the potential impact on soil contamination M. Elskens, L. Pussemier, P. Dumortier, K. Van Langenhove, G. Scholl, L. Goeyens and J.F. Focant (Belgium).	366
Home gardening near a mining site in an arsenic-endemic region of Arizona: Assessing arsenic exposure dose and risk via ingestion of home garden vegetables, soils, and water M.D. Ramirez-Andreotta, M.L. Brusseau, P. Beamer and R.M. Maier (USA)	373
Assessment of nitrogen and phosphorus loads and causal factors from different land use and soil types in the Three Gorges Reservoir Area Z. Shen, L. Chen, Q. Hong, J. Qiu, H. Xie and R. Liu (PR China)	383
Reaction of the immune system to low-level RF/MW exposures S. Szmigielski (Poland).	393
Effects of municipal wastewater on aquatic ecosystem structure and function in the receiving stream D. Englert, J.P. Zubrod, R. Schulz and M. Bundschuh (Germany, Sweden).	401
Removal of selected pharmaceuticals from domestic wastewater in an activated sludge system followed by a horizontal subsurface flow bed – Analysis of their respective contributions P. Verlicchi, A. Galletti, M. Petrovic, D. Barceló, M. Al Aukidy and E. Zambello (Italy, Spain)	411
Quantitative and qualitative greywater characterization in Greek households and investigation of their treatment using physicochemical methods G. Antonopoulou, A. Kirkou and A.S. Stasinakis (Greece)	426
Cluster analysis of social and environment inequalities of infant mortality. A spatial study in small areas revealed by local disease mapping in France C.M. Padilla, S. Deguen, B. Lalloue, O. Blanchard, C. Beaugard, F. Troude, D.Z. Navier and V.M. Vieira (France, USA)	433
Spatial and temporal occurrence of pharmaceuticals and illicit drugs in the aqueous environment and during wastewater treatment: New developments D.R. Baker and B. Kasprzyk-Hordern (UK)	442
Methane production and ebullition in a shallow, artificially aerated, eutrophic temperate lake (Lake Elsinore, CA) D. Martinez and M.A. Anderson (United States).	457
Oxidative status in nestlings of three small passerine species exposed to metal pollution M.J. Rainio, M. Kanerva, J.-P. Salminen, M. Nikinmaa and T. Eeva (Finland)	466
Landscape effects on soundscape experience in city parks J. Liu, J. Kang, T. Luo and H. Behm (China, Germany, United Kingdom)	474
Transcriptomic seasonal variations in a natural population of zebra mussel (<i>Dreissena polymorpha</i>) A. Navarro, B. Campos, C. Barata and B. Piña (Spain).	482

Intercalibrating classifications of ecological status: Europe's quest for common management objectives for aquatic ecosystems S. Birk, N.J. Willby, M.G. Kelly, W. Bonne, A. Borja, S. Poikane and W. van de Bund (Germany, UK, Italy, Belgium, Spain)	490
Spatial and temporal trends of contaminants in mussel sampled around the Icelandic coastline E. Sturludottir, H. Gunnlaugsdottir, H.O. Jorundsdottir, E.V. Magnusdottir, K. Olafsdottir and G. Stefansson (Iceland)	500
Effects of elevated CO ₂ on rhizosphere characteristics of Cd/Zn hyperaccumulator <i>Sedum alfredii</i> T. Li, Q. Tao, X. Han and X. Yang (China)	510
Bacterial communities in tetrachloroethene-polluted groundwaters: A case study M. Kotik, A. Davidová, J. Voříšková and P. Baldrian (Czech Republic)	517
PCDD/Fs and dioxin-like PCBs in surface sediments from Lake Victoria, East Africa P. Ssebugere, B.T. Kiremire, B. Henkelmann, S. Bernhöft, J. Wasswa, G.N. Kasozi and K.-W. Schramm (Uganda, Germany)	528
Seasonal variations in the atmospheric concentrations of polybrominated diphenyl ethers in Kuwait B. Gevao, A.N. Ghabban, M. Porcelli, L. Ali, A. Rashdan, M. Al-Bahloul, K. Matrouk and J. Zafar (Kuwait)	534
The use of vintage surficial sediment data and sedimentary cores to determine past and future trends in estuarine metal contamination (Sydney estuary, Australia) G.F. Birch, C.-H. Chang, J.-H. Lee and L.J. Churchill (Australia)	542
Association of arsenic, cadmium and manganese exposure with neurodevelopment and behavioural disorders in children: A systematic review and meta-analysis M. Rodríguez-Barranco, M. Lacasaña, C. Aguilar-Garduño, J. Alguacil, F. Gil, B. González-Alzaga and A. Rojas-García (Spain)	562
Degradation of vinyl chloride (VC) by the sulfite/UV advanced reduction process (ARP): Effects of process variables and a kinetic model X. Liu, S. Yoon, B. Batchelor and A. Abdel-Wahab (USA, Qatar)	578
Evaluation of the potential bioaccumulation ability of the blood cockle (<i>Anadara granosa</i> L.) for assessment of environmental matrices of mudflats S.A. Mirsadeghi, M.P. Zakaria, C.K. Yap and F. Gobas (Malaysia, Canada)	584
Biochar addition to an arsenic contaminated soil increases arsenic concentrations in the pore water but reduces uptake to tomato plants (<i>Solanum lycopersicum</i> L.) L. Beesley, M. Marmiroli, L. Pagano, V. Piloni, G. Fellet, T. Fresno, T. Vamerali, M. Bandiera and N. Marmiroli (Italy, Spain)	598
Methodology for the determination of normal background concentrations of contaminants in English soil E.L. Ander, C.C. Johnson, M.R. Cave, B. Palumbo-Roe, C.P. Nathanail and R.M. Lark (UK)	604
Assessment of halogenated POPs and PAHs in three cities in the Yangtze River Delta using high-volume samplers L. Zhang, T. Zhang, L. Dong, S. Shi, L. Zhou and Y. Huang (China)	619
Stable groundwater quality in deep aquifers of Southern Bangladesh: The case against sustainable abstraction P. Ravenscroft, J.M. McArthur and M.A. Hoque (Bangladesh, UK)	627
Corrigendum to "A meta-analysis of the effects of pesticides and fertilizers on survival and growth of amphibians" [Sci Total Environ 449 (2013) 150–156] N.J. Baker, B.A. Bancroft and T.S. Garcia (USA)	639