

CURRICULUM VITAE

Alexander van Geen
(September 2020)

Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY 10964, USA
Phone: (845) 365 8644; Fax: (845) 365 8154
E-mail: avangeen@ldeo.columbia.edu
<http://www.ldeo.columbia.edu/~avangeen/>

Education Ph.D. Oceanography, Massachusetts Institute of Technology-Woods Hole Oceanographic Institution, Cambridge, MA, 1989
Thesis title: "Trace metal sources for the Atlantic inflow to the Mediterranean Sea" (Edward A. Boyle, advisor).
B.S. Oceanography, B.S. Chemistry (cum laude), University of Washington, Seattle, WA, 1982

Employment 2010- Lamont Research Professor
2000-2010 Doherty Senior Research Scientist
1997, 2002, Professeur Invité, Université d'Aix-Marseille III, France.
1997-2000 Research Scientist, Lamont-Doherty Earth Observatory
1994-1997 Associate Research Scientist, LDEO
1993 Adjunct Research Scientist, LDEO
1990-1993 Post-doctoral investigator, Water Resources Division, U.S. Geological Survey, Menlo Park, California
1989-1990 Post-doctoral fellow, Department of Civil and Environmental Engineering, Stanford University
1984-1989 Research assistant, Department of Earth, Atmospheric and Planetary Sciences, MIT
1982-1984 Watch officer on Dutch navy research vessel *Tydeman*

Research interests

From chemical oceanography and paleoceanography, my interests have increasingly turned to interactions between the environment and human health. The theme that runs through my ongoing projects is that patterns of contamination, e.g. arsenic (As) in well water across South Asia or lead (Pb) in soil contaminated with mine tailings in the Peruvian Andes, are spatially highly variable. This complicates prediction but also creates opportunities for mitigation. My students and I promote more widespread deployment of field kits for testing water and soil, developing new kits if necessary, in order to identify and avoid exposure to toxins of children in particular. I tend to focus on the vulnerability of (and access to) uncontaminated water or soil by working with earth scientists and engineers, as well as public health and social scientists.

Selected professional activities

Member of the Earth Institute faculty, January 2011-

Convener of two ICDP workshops to develop new sampling technologies for groundwater studies, Salt Lake City (technical feasibility, 8/2010) and Hanoi (science plan, 4/2011)
 Convener, US-Mexico workshop on climate research funded by NSF (August 2009)
 Co-convener, AGU Chapman conference on groundwater arsenic (Cambodia, March 2009)
 Associate Director, the Earth Clinic of the Earth Institute at Columbia University, 2008-2012
 Chair, AQUATRAN advisory committee (EU Research Training Network, 2007-2010).
 Panelist, Agence Nationale de la Recherche, Sciences de l'Univers et Geoen., Paris, 2006
 Committee member, the Earth Clinic of the Earth Institute at Columbia University, 2005-
 Committee member, Cross-Cutting Initiatives of the Earth Institute at Columbia U, 2005-
 Associate Director, Columbia University NIEHS Superfund Basic Research Program, 2000-
 US patent 7,336,362 for reagents in arsenic field kit, 2008
 Invited by UNICEF to present Columbia arsenic mitigation program, Bangkok, 2002.
 Interviewed by the BBC, *Scientific American*, *Science*, *Popular Science*, *Geotimes*, *The Economist*, *La Recherche*, *Frankfurter Allgemeine* and others about arsenic in Bangladesh.
 NSF panelist, Marine Geology and Geophysics, 1997 and 2000.
 Chief scientist, RV *Melville*, 1999; RV *Pt Sur*, 1995 and 1997.

Graduate advisees:

Zanna Chase (PhD DEES Columbia, 2001), Francesco Fiondella (MS DEES/JS Columbia, 2001), Renee Takesue (PhD DEES Columbia, 2002), Ken Kostel (MS DEES/JS, Columbia, 2002), Alisa Opar (MS DEES/JS Columbia, 2004), Sophie Thorat (Thèse de Doctorat, U. Aix-Marseille III, 2004), Alberto Sanchez (PhD 2006, UABC, Ensenada, Mexico), Allan Horneman (PhD 2005 DEEE, Columbia), Amy Schoenfeld (MS DEES/JS Columbia 2005), Jerome Metral (DESS University of Grenoble, 2005), Ratan Dhar (PhD CUNY 2006), Jessica Leber (MS DEES/JS Columbia, 2007), Karrie Radloff (PhD 2010 DEEE Columbia), Zahid Aziz (PhD 2011 DEES, Columbia U.), Peter Knappet (PhD 2010 Earth and Planetary Sciences, U. Tennessee), Christine George (PhD 2012 MSPH, Columbia), S. Xiah Kragie (MS 2012, DEES Columbia), John Feighery (PhD 2013, DEEE Columbia), Ivan Mihaljov (PhD 2013, DEES Columbia), Meridel Phillips (MS DEEE 2014), Yongfeng Jia (PhD 2015, China University of Geosciences, Beijing), Prabhat Barnwal (PhD 2015 SDEV Columbia U.), Md. Rajib Hassan Mozumder (PhD 2019, DEES, Columbia), Franziska Landes (PhD 2019, DEES, Columbia), Anand Kumar (PhD 2019, TERI University, India), Runti Choudhury (PhD 2017, IIT Guwahati, India), Brittany Huhmann (PhD 2018, MIT), Asif Javed (PhD candidate, Quaid-i-Azam University, Pakistan), Junaid Ali Khattak (PhD candidate, Quaid-i-Azam University, Pakistan), Ursula Ellis (Screenwriting and Directing MFA Thesis, Columbia 2016), Josalynn Smith (Screenwriting MFA Thesis, Columbia 2018).

Undergraduate advisees:

Anna Schmidt (1995, Boston College), Stefan Petranek (1996, Bowdoin College), Cristina Rumbaitis (1996, Columbia U.), Anna Michel (1996, MIT), Maryann Sapanara (1997, MIT), Elisabeth Scheidecker (U. South Carolina, 1998), Amanda Scdoris (Barnard College, 1999), Dina Stamler (Barnard College, 1999), Julien Emile-Geay (Ecole Normale Supérieure, Paris; 2000), Marta Vicarelli (Ecole Normale Supérieure, Paris; 2002), Roseline Louis (Ecole Normale Supérieure de Chimie, Rennes, France; 2004), Cristina Ortega (U. Chile, Santiago, Chile; 2005), Anya Manning (Barnard College, 2006), Sajaa Ahmed (Columbia College, 2007), Laura Seidman (Columbia College, 2007), Alexandrina Tzanova (Columbia College, 2008), Misheal Artani (Barnard College, 2008); Annael Goupil (Ecole Normale Supérieure de

Chimie, Rennes, France; 2010), Lucy Stowe (Columbia College, 2011), Fiona Kinniburgh (Columbia College, 2012); Joelle Boxer (Columbia College, 2016); James Gibson (Vassar College, 2018).

High school advisees:

Stefan Petranek (1995, Horace Greeley High School, Chappaqua, NY), Joy Ann Mahabir (2005, Bronx High School of Science, NY), Thomas Bidal d'Asfeld (2006, Lycée Jean-Baptiste-Say, Paris), Pamela Mishkin (Horace Mann High School, 2010-11), Capucine Le Meur (2013, Lycée Français de New York), Andrew Terraciano, Daniel Dusevic, Evan Sefchick, Jack Dougherty (2018-2020, all at Pelham Memorial High School, Westchester Co.).

Peer-reviewed journal publications:

187. Nghiem, A; Shen, Y; Stahl, M; Sun, J; Haque, E; DeYoung, B; Nguyen, K; Thi Mai, T; Trang, PTK; Pham, HV; Mailloux, B; Harvey, C; Van Geen, A; Benjamin, B. Aquifer-scale observations of iron redox transformations in arsenic-impacted environments to predict future contamination. *Environmental Science and Technology Letters*, <https://doi.org/10.1021/acs.estlett.0c00672>, 2020.

186. Huhmann BL, CF Harvey, MIT student, A Uddin, I Choudhury, KM Ahmed, JM Duxbury, B. Bostick, A van Geen. Evaluation of a field kit for testing arsenic in paddy soil contaminated by irrigation water. *Geoderma*, accepted September 2020.

185. van Geen A., Y. Yao, T. Ellis, A. Gelman. Fallout of lead over Paris from the 2019 Notre-Dame cathedral fire. *GeoHealth*, <https://doi.org/10.1029/2020GH000279>, 2020.

184. Mozumder RH, BC Bostick, M Selim, A Islam, EM Shoenfelt, T Ellis, BJ Mailloux, I Choudhury, KM Ahmed, A van Geen. Similar retardation of arsenic in gray Holocene and orange Pleistocene sediments: Evidence from field-based column experiments in Bangladesh. *Water Research*, <https://doi.org/10.1016/j.watres.2020.116081>, 2020.

183. Mailloux B, N Procopio, M Bakker, T Chen, I Choudhury, KM Ahmed, T Ellis, MR Mozumder, S Chillrud, A van Geen. Recommended sampling intervals for arsenic in private wells. *Groundwater*, <https://doi.org/10.1111/gwat.13020>, 2020.

182. Mozumder MRH, H.A. Michael, I. Mihajlov, M.R. Khan, P.S.K. Knappett, B.C. Bostick, B. J. Mailloux, K.M. Ahmed, I. Choudhury, T. Koffman, T. Ellis, K. Whaley-Martin, R. San Pedro, G. Slater, M. Stute, P. Schlosser, A. van Geen. Origin of groundwater arsenic in a rural Pleistocene aquifer in Bangladesh depressurized by distal municipal pumping. *Water Resources Research*, <https://doi.org/10.1029/2020WR0271782>, 2020.

181. Mihajlov I, MRH Mozumder, BC Bostick, M Stute, BJ Mailloux, PSK Knappett, I Choudhury, KM Ahmed, P Schlosser, A van Geen. Arsenic contamination of Bangladesh aquifers exacerbated by clay layers. *Nature Communications* 11, 2244 (2020). <https://doi.org/10.1038/s41467-020-16104-z>

180. Javed A, A Farooqi, ZU Baig, T Ellis, A van Geen. Soil arsenic but not rice arsenic increasing with arsenic in irrigation water in the Punjab plains of Pakistan. *Plant and Soil* (2020). DOI: 10.1007/s11104-020-04518-z.
179. Kumar A, B Bostick, A Nghiem, B Mailloux, A van Geen. Regulation of groundwater arsenic concentrations in the Ravi, Beas, and Sutlej floodplains of Punjab, India. *Geochim. Cosmochim. Acta* 276, 384-403 (2020). <https://doi.org/10.1016/j.gca.2020.03.003>
178. Krupoff M, AM Mobarak, A van Geen. Evaluating Strategies to Reduce Arsenic Poisoning in South Asia: A View from the Social Sciences. *Asian Development Review*, accepted March 2020.
177. Tarozzi A, R Maertens, KM Ahmed, A van Geen. Demand for information on environmental health risk, mode of delivery, and behavioral change: Evidence from Sonargaon, Bangladesh. *World Bank Economic Review* lhaa009 (2020). <https://doi.org/10.1093/wber/lhaa009>
176. Filippelli G, S Anenberg, M Taylor, A van Geen, H Khreis. New approaches to identifying and reducing the global burden of disease from pollution. *GeoHealth* <https://doi.org/10.1029/2018GH000167>, 2020.
175. Khan MR, HA Michael, B Nath, BL Huhmann, CF Harvey, A Mukherjee, M Chakraborty, I Choudhury, MS Ullah, KM Ahmed, SL Goodbred, Jr., P Schlosser, BC Bostick, BJ Mailloux, A van Geen. High-arsenic groundwater in the southwestern Bengal Basin caused by a lithologically controlled deep flow system. *Geophysical Research Letters* 46. <https://doi.org/10.1029/2019GL084767>.
174. Landes, F., Inauen, J. Ponce, J.C., Markowski, K., Ellis, T., van Geen, A. Landes, F. C., Inauen, J., Ponce- Canchihuamán, J., Markowski, K., Ellis, T. K., & van Geen, A. (2019). Does involving parents in soil sampling identify causes of child exposure to lead? A case study of community engagement in mining-impacted towns in Peru. *GeoHealth*, 3, 218–236. <https://doi.org/10.1029/2019GH000200>
173. Nghiem AA, MO Stahl, BJ Mailloux, TT Mai, PT Trang, PH Viet, CF Harvey, A van Geen, BC Bostick. Quantifying Riverine Recharge on Redox Conditions and Arsenic Release in Groundwater Aquifers along the Red River, Vietnam. *Water Resources Research*, 2019. doi.org/10.1029/2019WR024816
172. Landes F, A Paltseva, J Sobolewski, Z Cheng, T Ellis, B Mailloux, A van Geen. A field procedure to screen soil for hazardous lead. *Analytical Chemistry* 91, 8192-8198, 2019. doi.org/10.1021/acs.analchem.9b00681
171. Jamil NB, Feng H, Ahmed KM, Choudhury I, Barnwal P, van Geen A. Effectiveness of different approaches to arsenic mitigation over 18 years in Araihaazar, Bangladesh: Implications for national policy. *Environmental Science and Technology* 53: 5596–5604. 2019. DOI: 10.1021/acs.est.9b01375

170. Huhmann BL, CF Harvey, A Uddin, I Choudhury, KM Ahmed, JM Duxbury, T Ellis, A van Geen. Inversion of high-arsenic soil for improved rice yield in Bangladesh. *Environmental Science and Technology* 53, 3410–3418, 2019.
169. Huhmann BL, CF Harvey, A Navas-Acien, J Graziano, F Parvez, Y Chen, M Argos, A Ahmed, AKMR Hasan, H Ahsan, A van Geen. Changes in arsenic exposure in Araihaazar, Bangladesh from 2001 through 2015 following a blanket well testing and education campaign. *Environment International* 125, 82-89, 2019.
168. van Geen A, A Farooqi, A Kumar, JA Khattak, N Mushtaq, I Hussain, T Ellis, CK Singh. Field testing of over 30,000 wells for arsenic across 400 villages of the Punjab plains of Pakistan and India: Implications for prioritizing mitigation. *Science of the Total Environment* 654, 1358-1363, 2019.
167. Sanchez, T, V Slavkovich, N Lolocono, A van Geen, T Ellis, S Chillrud, O Balac, T Islam, MF Parvez, H Ahsan, J Graziano, A Navas-Acien. Urinary metals and metal mixtures in Bangladesh: Exploring environmental sources in the Health Effects of Arsenic Longitudinal Study (HEALS). *Environment International* 121, 852-860, 2018.
166. Choudhury R, B Nath, MR Khan, C Mahanta, T Ellis, A van Geen. The impact of aquifer flushing on groundwater arsenic across a 35-km transect perpendicular to the Upper Brahmaputra River in Assam, India. *Water Resources Research*, doi:10.1029/2017WR022485, 2018.
165. Wasserman G.A., X. Liu, F. Parvez, Y. Chen, P. Factor-Litvak, N. Lolocono, D. Levy, H. Shahriar, M.N. Uddin, T. Islam, A. Lomax, R. Saxena, E.A. Gibson, M.-A. Kiourmouzoglou, O. Balac, D. Santiago, T. Ellis, A. van Geen, J.H. Graziano. A cross-sectional study of water arsenic exposure and intellectual function in adolescence in Araihaazar, Bangladesh. *Environment International* 118, 304-313, 2018.
164. Sun J, Mailloux BJ, Chillrud SN, van Geen A, Thompson A, Bostick BC. Simultaneously quantifying ferrihydrite and goethite in natural sediments using the method of standard-additions with X-ray absorption spectroscopy. *Chemical Geology* 476, 248-259, 2018.
163. Huhmann, B. L., C. F. Harvey, A. Uddin, I. Choudhury, K. M. Ahmed, J. M. Duxbury, B. C. Bostick and A. van Geen. Field study of rice yield diminished by soil arsenic in Bangladesh. *Environmental Science and Technology* 51, 11553-11560, 2017.
162. Gnanaprakasamb E T, J R Lloyd, C Boothman, K M Ahmed, I Chowdhury, B C Bostick, A van Geen, B J Mailloux. The microbial community structure and arsenic biogeochemistry in two arsenic impacted aquifers in Bangladesh. *mBio* 8:e01326-17.2017, 2017.

161. Barnwal P, A van Geen, J von der Goltz, CK Singh. Demand for environmental quality information and household response: Evidence from well-water arsenic testing. *Journal of Environmental Economics and Management* 86, 160-192, 2017.
160. Haque E, BJ Mailloux, D De Wolff, S Gilioli, C Kelly, E Ahmed, C Small, KM Ahmed, A van Geen, BC Bostick. Quantitative drinking water arsenic concentrations measured using mobile phone photometry of field kits. *Science of the Total Environment* doi.org/10.1016/j.scitotenv.2016.12.123, 2017.
159. Whaley-Martin K J, B C Bostick, B J Mailloux, A van Geen, KM Ahmed, I Choudhury, G F Slater, Human and livestock waste as a reduced carbon source contributing to the release of arsenic to shallow Bangladesh groundwater. *Science of the Total Environment* 595, 63-71, 2017.
158. Pfaff A, Schoenfeld A, Ahmed KM, van Geen A. Reduction in exposure to arsenic limited by insufficient testing and awareness in Bangladesh. *Journal of Water, Sanitation and Hygiene for Development* 7, 331-339, 2017.
157. Khan M.R., Koneshloo M., Knappett P.S.K. Ahmed, K.M., Bostick B.C., Mailloux, B.J., Mozumder R.H., Zahid A., Harvey C.F., van Geen A., Michael H.A. Megacity pumping and preferential flow threaten groundwater quality. *Nature Communications* 7:12833 doi: 10.1038/ncomms12833, 2016.
156. Stahl, M, C Harvey, A van Geen, J Sun, P K T Trang, M L Vi, T M Phuoung, P H Viet. Stahl, M. O., C. F. Harvey, A. van Geen, J. Sun, P. Thi Kim Trang, V. Mai Lan, T. Mai Phuong, P. Hung Viet, B. C. Bostick. River bank geomorphology controls groundwater arsenic concentrations in aquifers adjacent to the Red River, Hanoi, Vietnam. *Water Resources Research* 52, 6321–6334, doi:10.1002/2016WR018891, 2016.
155. Whaley-Martin, K; Mailloux, B; van Geen, A; Bostick, B; Silvern, R; Kim, C; Ahmed, K; Choudhury, I; Slater, G. Stimulation of microbially-mediated arsenic release in Bangladesh aquifers by young carbon indicated by radiocarbon analysis of bacterial lipids. *Environmental Science and Technology* 50, 7353–7363, 2016.
154. Knappett, PSK, BJ Mailloux, I Choudhury, M Khan, H Michael, S Barua, DR Mondal, M Steckler, H Akter, KM Ahmed, B Bostick, C Harvey, M Shamsudduha, I Mihajlov, R Mozumder, A. van Geen. Vulnerability of low-arsenic aquifers to municipal pumping in Bangladesh. *Journal of Hydrology* 539, 674–686, 2016.
153. Sanchez T.R., Levy D., Siddique A.B., Shahriar M.H., Uddin M.N., Lomax-Luu A., Graziano J., van Geen A., Gamble M.V. Provision of well-water treatment units to 600 households in Bangladesh: A longitudinal analysis of urinary arsenic indicates fading utility. *Science of the Total Environment* 563–564, 131–137, 2016.
152. Mihajlov I., M. Stute, P. Schlosser, B. J. Mailloux, Y. Zheng, I. Choudhury, K.M. Ahmed, A. van Geen. Recharge of low-arsenic aquifers tapped by community wells in Araihaazar,

Bangladesh, inferred from environmental isotopes. *Water Resources Research* 52, doi:10.1002/2015WR018224, 2016.

151. Aziz, Z., B. Bostick, Y. Zheng, M.R Huq, M.M. Rahman, K.M. Ahmed, and A. van Geen, Evidence of decoupling between arsenic and phosphate in shallow groundwater of Bangladesh and potential implications, *Applied Geochemistry* doi:10.1016/j.apgeochem.2016.03.001, 2016.

150. Choudhury, I., K.M. Ahmed, M. Hasan, M.R.H. Mozumder, P.S.K. Knappett, T. Ellis, A. van Geen. Evidence for elevated levels of arsenic in public wells of Bangladesh due to improper installation. *Groundwater* DOI: 10.1111/gwat.12417, 2016.

149. Wasserman, GA, X Liu, F Parvez, P Factor-Litvak, J Kline, AB Siddique, H Shahriar, M Nasirrudin, A van Geen, J Mey, O Balac, JH Graziano. Child intelligence and reductions in water arsenic and manganese: A two-year follow-up study in Bangladesh. *Environmental Health Perspectives*, DOI: 10.1289/ehp.1509974, 2015.

148. Radloff, KA, Y Zheng, M Stute, B Weinman, B Bostick, I Mihajlov, M Bounds, MM Rahman, MR Huq, KM Ahmed, P Schlosser, A van Geen. Adsorption and flushing of arsenic in a rapidly recharged shallow aquifer of Bangladesh. *Applied Geochemistry* DOI: 10.1016/j.apgeochem.2015.11.003 NIHMSID747884, 2015.

147. van Geen A, KM Ahmed, EB Ahmed, I Choudhury, MR Mozumder, BC Bostick, BJ Mailloux. Inequitable allocation of deep community wells for reducing arsenic exposure in Bangladesh. *Journal of Water, Sanitation and Hygiene for Development* 6, 142-150, 2016. DOI: 10.2166/washdev.2015.115. NIHMSID747882

146. Peters, BA, MN Hall, X Liu, P Factor-Litvak, F Parvez, A van Geen, JL Mey, AB Siddique, MH Shahriar, MN Uddin, MT Islam, V Slavkovich, V Ilievski, JH Graziano, MV Gamble. Folic acid and creatine as therapeutic approaches to lower blood arsenic: A randomized-controlled trial. *Environmental Health Perspectives* 123, 1294–1301, 2015.

145. Guillot S, L Charlet, D Tisserand, B Weinman, C France-Lanord, M Garcon, S Chakraborty, JRS Huyghe, A van Geen, BN Upreti, AP Gajurel. Origin of arsenic in Late Pleistocene to Holocene sediments in the Nawalparasi District (Terai, Nepal). *Environmental Earth Sciences* 74, 2571-2593, 2015.

144. Khan K, EB Ahmed, P Factor-Litvak, X Liu, Z Rahman, HA Ferdous, AB Siddique, GA Wasserman, V Slavkovich, D Levy, J Mey, A van Geen, JH Graziano. Evaluation of an elementary school-based educational intervention for reducing arsenic exposure in Bangladesh. *Environmental Health Perspectives* 123, 1331–1336, 2015.

143. Layton, A; A Chauhan, D Williams, B Mailloux, P Knappett, A Ferguson, L McKay, MJ Alam, KM Ahmed, A van Geen, G Sayler. Metagenomes of microbial communities in arsenic and pathogen contaminated well and surface water from Bangladesh. *Genome Announcements (genomeA)*. 2(6):e01170-14. doi:10.1128/genomeA.01170-14, 2014.

142. Deutsch C, Berelson W, Thunell R, Weber T, Tems C, McManus J, Crusius J, Ito T, Baumgartner T, Ferreira V, Mey J, van Geen A. Centennial changes in North Pacific anoxia linked to tropical trade winds. *Science* 345, 665-668, 2014.
141. Wasserman GA, Liu X, Kline J, Factor-Litvak P, LoIacono N, van Geen A, Mey JL, Levy D, Abramson R, Schwartz A, Graziano JH, Exposure to arsenic from household wells and intelligence, in Maine schoolchildren. *Environmental Health* 13:23, 2014.
140. Stahl, MO, JB Ong, CF Harvey, CD Johnson, ABM Badruzzaman, MH Tarek, A. van Geen, JA Anderson, JW Lane. Well-casing leak detection: Applications of fluid replacement logging in arsenic-contaminated aquifers of Bangladesh. *Groundwater* 52, 195–200, 2014. PMC4393651
139. Harper, K.N., X. Liu, M.N. Hall, V. Ilievski, J. Oka, L. Calancie, V. Slavkovich, D. Levy, J.L. Mey, A. van Geen, J.H. Graziano, M.V. Gamble. A dose-response study of arsenic exposure and markers of oxidative damage in Bangladesh. *Journal of Occupational and Environmental Medicine* 56: 652-8, 2014.
138. van Geen A, EBA Sumon, L Pitcher, JL Mey, H Ahsan, JH Graziano, KM Ahmed. Comparison of two blanket surveys of arsenic in tubewells conducted 12 years apart in a 25 km² area of Bangladesh. *Science of the Total Environment* 488-489, 484-92, 2014.
137. van Geen A, KH Win, T Zaw, W Naing, JL Mey, B Mailloux. Confirmation of elevated arsenic levels in groundwater of Myanmar. *Science of the Total Environment* 478, 21-24, 2014.
136. Chen Y, Wu F, Parvez F, Ahmed A, Eunus M, McClintock TR, Patwary TI, Islam T, Ghosal AK, Islam S, Hasan R, Levy D, Sarwar G, Slavkovich V, van Geen A, Graziano JH, Ahsan H. Arsenic exposure from drinking water and QT-interval prolongation: results from the Health Effects of Arsenic Longitudinal Study. *Environ Health Perspect.* 2013 Apr;121(4):427-32. PMID: PMC3620737.
135. Knappett, P.K., J. Du, P. Liu, V. Horvath, B. J. Mailloux, J. Feighery, A. van Geen, P. J. Culligan. Importance of reversible attachment in predicting *E. coli* transport in saturated aquifers from column experiments. *Advances in Water Resources* <http://dx.doi.org/10.1016/j.advwatres.2013.11.005>, 2013.
134. Balasubramanya S, A Pfaff, L Benneer, A Tarozzi, KM Ahmed, A Schoenfeld, A van Geen, Evolution of households' responses to the groundwater arsenic crisis in Bangladesh: information on environmental health risks can have increasing behavioral impact over time. *Environment & Development Economics*, doi:10.1017/S1355770X13000612, 2013.
133. Niedzwiecki, MN, MN Hall, X Liu, J Oka, KN Harper, V Slavkovich, V Ilievski, D Levy, A van Geen, JL Mey, S Alam, AB Siddique, F Parvez, JH Graziano, MV Gamble. A dose–response study of arsenic exposure and global methylation of peripheral blood

mononuclear cells in Bangladeshi adults. *Environmental Health Perspectives* DOI:10.1289/ehp.1206421, 2013.

132. van Geen, BC Bostick, PTK Trang, VM Lan, NN Mai, PD Man, PH Viet, K Radloff, Z Aziz, JL Mey, MO Stahl, CF Harvey, P Oates, B Weinman, C Stengel, F Frei, R Kipfer, M Berg. Retardation of arsenic transport through a Pleistocene aquifer. *Nature* 501: 204–207, 2013.

131. Hall, MN, M Niedzwiecki, X Liu, KN Harpe, S Alam, V Slavkovich, V Ilievski, D Levy, S Siddique, F Parvez, JL Mey, A van Geen, JH Graziano, MV Gamble. Chronic arsenic exposure and blood glutathione and glutathione disulfide concentrations in Bangladeshi adults. *Environmental Health Perspectives* DOI: 10.1289/ehp.1205727, 2013.

130. Niedzwiecki, MM, MN Hall, X Liu, J Oka, KN Harper, V Slavkovich, V Ilievski, D Levy, A van Geen, JL Mey, S Alam, AB Siddique, F Parvez, JH Graziano, MV Gamble. Blood glutathione redox status and global methylation of peripheral blood mononuclear cell DNA in Bangladeshi adults. *Epigenetics* 8(7):730-8, 2013.

129. Feighery F, BJ Mailloux, AS Ferguson, KM Ahmed, A van Geen⁵, PJ Culligan, Transport of *E. coli* in aquifer sediments of Bangladesh: Implications for widespread microbial contamination of groundwater. *Water Resources Research* DOI: 10.1002/wrcr.20289, 2013.

128. Mailloux BJ, E Trembath-Reichert, J Cheung, M Watson, M Stute, GA Freyer, AS Ferguson, KM Ahmed, MJ Alam, BA Buchholz, J Thomas, AC Layton, Y Zheng, BC Bostick, A van Geen, Advection of surface-derived organic carbon fuels microbial reduction in Bangladesh groundwater, *PNAS* 110: 5331-5335, 2013.

127. van Geen A, C Bravo, V Gil, S Sherpa, D Jack, Soil as a source of lead exposure in Peruvian mining towns: A national assessment supported by two contrasting examples, *Bulletin of the World Health Organization*, 90:878–886, 2012.

126. Knappett P, LD McKay, A Layton, DE Williams, MJ Alam, BJ Mailloux, AS Ferguson, PJ Culligan, ML Serre, M Emch, KM Ahmed, GS Saylor, A van Geen, Unsealed tubewells lead to increased fecal contamination of drinking water, *Journal of Water and Health* 10.4, 565-578, 2012.

125. George, CM, Y Zheng, JH Graziano, SB Rasul, JL Mey, A van Geen, Evaluation of an arsenic test kit for rapid well screening in Bangladesh, *Environmental Science and Technology* 46, 11213–11219, 2012.

124. George, Christine Marie, K Khan, Tariqul Islam, Ashit Singha, Joyce Moon-Howard, Pam Factor-Litvak, Alexander van Geen, Joseph H Graziano, Approaches to increase arsenic awareness in Bangladesh: An evaluation of an arsenic education program, *Health Education & Behavior*, doi: 10.1177/1090198112454735, 2012.

123. Benneer L, A Tarozzi, A Pfaff, HB Soumya, KM Ahmed, A van Geen, Impacts of a randomized controlled trial in arsenic risk communication on household water supply choices in Bangladesh, *Journal of Environmental Economics and Management*, 65, 225-240, 2012.
122. George, CM, A van Geen, V Slavkovich, A Singha, D Levy, T Islam, KM Ahmed, J Moon-Howard, A Tarozzi, X Liu, P Factor-Litvak, J Graziano. A cluster-based randomized controlled trial promoting community participation in arsenic mitigation efforts in Bangladesh, *Environmental Health* 11:41, 2012.
121. Ferguson AS, AC Layton, BJ Mailloux, PJ Culligan, DE Williams, AE Smartt, J Feighery, L McKay, P Knappett, E Alexandrova, T Arbit, M Emch, V Escamilla, KM Ahmed, MJ Alam, PK Streatfield, M Yunus, A van Geen, Comparison of fecal indicators with pathogenic bacteria and rotavirus in groundwater, *Science of the Total Environment*, 431, 314–322, 2012.
120. Wu, F; Jasmine, F; Kibriya, MG; Liu, ML; Wojcik, O; Parvez, F; Rahaman, R; Roy, S; Paul-Brutus, R; Segers, S; Slavkovich, V; Islam, T; Levy, D; Mey, JL; van Geen, A; Graziano, JH; Ahsan, H; Chen, Y. Association between arsenic exposure from drinking water and plasma levels of cardiovascular markers, *American Journal of Epidemiology* 175, 1252-1261, 2012.
119. George CM, Graziano JH, Mey JL, van Geen A, Impact on arsenic exposure of a growing proportion of untested wells in Bangladesh, *Environmental Health* 11:7, DOI: 10.1186/1476-069X-11-7, 2012.
118. Khan, K, GA Wasserman, X Liu, E Ahmed, F Parvez, V Slavkovich, D Levy, J Mey, A van Geen, JH Graziano, P Factor-Litvak, Manganese exposure from drinking water and children's academic achievement, *NeuroToxicology* 33, 91-97, 2012.
117. Knappett PSK, LD McKay, A Layton, DE Williams, MJ Alam, MR Huq, J Mey, JE Feighery, PJ Culligan, BJ Mailloux, J Zhuang, V Escamilla, M Emch, E Perfect, GS Sayler, KM Ahmed, Implications of fecal bacteria input from latrine-polluted ponds for wells in sandy aquifers, *Environmental Science and Technology* 46, 1361–1370, 2012.
116. Wasserman, G.A., X. Liu, F. Parvez, H. Ahsan, D. Levy, P. Factor-Litvak, J. Kline, A. van Geen, J. Mey, V. Slavkovich, Abu Siddique, T. Islam, J.H. Graziano, Arsenic and manganese exposure and children's intellectual function, *NeuroToxicology* 32, 450-457, 2011.
115. Wu J, A van Geen, KM Ahmed, Y Akita, MJ Alam, PJ Culligan, V Escamilla, J Feighery, AS Ferguson, P Knappett, BJ Mailloux, LD McKay, ML Serre, PK Streatfield, M Yunus, M Emch, Increase in diarrheal disease associated with arsenic mitigation in Bangladesh, *PLoS ONE* 6(12): e29593. doi:10.1371/journal.pone.0029593, 2011.
114. Wu, J, M Yunus, PK Streatfield, A van Geen, V Escamilla, Y Akita, M Serre, M Emch, Impact of tubewell access and depth on childhood diarrhea in Matlab, Bangladesh, *Environmental Health* 10:109 doi:10.1186/1476-069X-10-109, 2011.

113. Ferguson AS, BJ Mailloux, KM Ahmed, A van Geen, LD McKay, and PJ Culligan, Hand-pumps as reservoirs for microbial contamination of well water, *Journal of Water and Health* 9.04: 708-717, 2011.
112. Knappett, PSK, V Escamilla, A Layton, LD McKay, M Emch, DE Williams, MR Huq, MJ Alam, L Farhana, BJ Mailloux, A Ferguson, GS Saylor, KM Ahmed, A van Geen, Impact of sanitation on fecal bacteria and pathogens in ponds of Bangladesh, *Science of the Total Environment* 409, 3174-3182, 2011.
111. Radloff K.A., Y. Zheng, H.A. Michael, M. Stute, B. Bostick, I. Mihajlov, M. Bounds, M.R. Huq, I. Choudhury, M.W. Rahman, P. Schlosser, K. M. Ahmed, A. van Geen, Arsenic migration to deep groundwater in Bangladesh influenced by adsorption and water demand, *Nature Geoscience* 4,793–798, 2011.
110. Parvez F, GA Wasserman, P Factor-Litvak, X Liu, V Slavkovich, AB Siddique, Rebeka Sultana, Ruksana Sultana, T Islam, D Levy, JL Mey, A van Geen, KM Khan, J Kline, H Ahsan, JH Graziano, Arsenic exposure and motor function among children in Bangladesh, *Environmental Health Perspectives* 119:1665-1670, 2011.
109. Chen Y, JH Graziano, F Parvez, M Liu, V Slavkovich, T Kalra, M Argos, T Islam, A Ahmed, M Rakibuz-Zaman, R Hasan, D Levy, A van Geen, and H Ahsan, Arsenic exposure from drinking water and cardiovascular disease mortality: A prospective cohort study in Bangladesh, *British Medical Journal* 342:d243, 2011.
108. Khan, K., P. Factor-Litvak, G.A. Wasserman, X. Liu, E. Ahmed, F. Parvez, V. Slavkovich, D. Levy, J. Mey, A. van Geen, J.H. Graziano, Effect of manganese exposure from drinking water on children's classroom behaviour, *Environmental Health Perspectives* 119, 1501-1506, 2011.
107. Escamilla, V., B. Wagner, M. Yunus, P.K. Streatfield, A. van Geen, M. Emch, Effect of deep tube well use on childhood diarrhoea in Bangladesh, *Bulletin of the World Health Organization*, 89:521–527, 2011.
106. Dhar, RK, Y Zheng, CW Saltikov, KA Radloff, B Mailloux, KM Ahmed, A van Geen, Microbes enhance mobility of arsenic in Pleistocene aquifer sand from Bangladesh, *Environmental Science and Technology*, dx.doi.org/10.1021/es1022015, 2011.
105. van Geen A, KM Ahmed, Y Akita, MJ Alam, PJ Culligan, J Feighery, A Ferguson, M Emch, V Escamilla, P Knappett, AC Layton, BJ Mailloux, LD McKay, JL Mey, ML Serre, PK Streatfield, J Wu, M Yunus, Fecal contamination of shallow tubewells in Bangladesh inversely related to arsenic, *Environmental Science and Technology*, DOI: 10.1021/es103192b Publication Date (Web): January 12, 2011.

104. Marchitto, T.M., R. Muscheler, J.D. Ortiz, J.D. Carriquiry, A. van Geen. Dynamical response of the tropical Pacific Ocean to solar forcing during the Holocene. *Science* 330, 1378-1381, 2010.
103. Garnier, J.-M., F. Travassac, V. Lenoble, J. Rose, Y. Zheng, M. Hossain, S. Chowdhury, A. Biswas, K.M. Ahmed; Z. Cheng, A. van Geen, Temporal variations in arsenic uptake by rice plants: The role of iron plaque in paddy fields of Bangladesh irrigated with groundwater, *Science of the Total Environment* 408, 4185-4193, 2010.
102. Knappett PSK, A Layton, LD McKay, D Williams , BJ Mailloux, MdR Huq, MdJ Alam, KM Ahmed, Y Akita, ML Serre, GS Sayler, A van Geen, Efficacy of hollow-fiber ultrafiltration for microbial sampling in groundwater, *Ground Water* DOI: 10.1111/j.1745-6584.2010.00712.x, 2010.
101. Leber J, MM Rahman, KM Ahmed, B Mailloux, A van Geen, Contrasting influence of geology on *E. coli* and arsenic in aquifers of Bangladesh, *Ground Water* DOI: 10.1111/j.1745-6584.2010.00689.x, 2010.
100. Argos, M., T Kalra, PJ Rathouz, Y Chen, B Pierce, F Parvez, T Islam, A Ahmed, M Rakibuz-Zaman, R Hasan, G Sarwar, V Slavkovich, A van Geen, J Graziano, H Ahsan, A prospective cohort study of arsenic exposure from drinking water and all-cause and chronic disease mortality in Bangladesh, *The Lancet*, DOI:10.1016/S0140-6736(10)60481-3, 2010.
99. Fendorf S., H. Michael, A. van Geen, Spatial and temporal variations of groundwater arsenic in South and Southeast Asia, *Science*, 328, 1123-1127, 2010.
98. van Geen, A, K Radloff, Z Aziz, Z Cheng, MR Huq, KM Ahmed, B Weinman, S. Goodbred, M. Berg, PTK Trang, L Charlet, J Metral, D Tisserand, S Guillot, S Chakraborty, AP Gajurel, BN Upreti, Comparison of arsenic concentrations in simultaneously-collected groundwater and aquifer particles from Bangladesh, India, Vietnam, and Nepal, *Applied Geochemistry*, 23, 3244-3251, 2008.
97. Eiche, E., T. Neumann, M. Berg, B. Weinman, S. Norra, Z. Berner, A. van Geen, P.T.K. Trang, P.H. Viet, D. Stüben, Geochemical processes underlying a sharp contrast in groundwater arsenic concentrations in a village on the Red River delta, Vietnam, *Applied Geochemistry*, 23, 3143-3154, 2008.
96. Radloff, KA, AR Manning, B. Mailloux, Y. Zheng, MM Rahman, MR. Huq, KM Ahmed, M Stute, A van Geen, Considerations for conducting incubations to study the mechanisms of As release in reducing groundwater aquifers, *Applied Geochemistry*, 23, 3224-3235, 2008.
95. Dhar, R.K., Y. Zheng, M. Stute, A. van Geen, Z. Cheng, M. Shanewaz, M. Shamsudduha, M.A. Hoque, M.W. Rahman, and K.M. Ahmed, Temporal variability of groundwater chemistry in shallow and deep aquifers of Araihasar, Bangladesh, *Journal of Contaminant Hydrology* 99, 97–111, 2008.

94. Zablotska, L. B., Chen, Y., Graziano, J. H., Parvez, F., van Geen, A., Howe, G. R., Ahsan, H., Protective effects of B vitamins and antioxidants on the risk of arsenic-related skin lesions in Bangladesh, *Environmental Health Perspectives* 116, 1056-1062, 2008.
93. Aziz, Z., A. van Geen, R. Versteeg, A. Horneman, Y. Zheng, S. Goodbred, M. Steckler, M. Stute, B. Weinman, I. Gavrieli, M.A. Hoque, M. Shamsudduha, and K.M. Ahmed, Impact of local recharge on arsenic concentrations in shallow aquifers inferred from the electromagnetic conductivity of soils in Araihasar, Bangladesh, *Water Resources Research* 44, W07416, doi:10.1029/2007WR006000, 2008.
92. van Geen, A., Y. Zheng, S. Goodbred Jr., A. Horneman, Z. Aziz, Z. Cheng, M. Stute, B. Mailloux, B. Weinman, M.A. Hoque, A.A. Seddique, M.S. Hossain, S.H. Chowdhury, and K. M. Ahmed, Flushing history as a hydrogeological control on the regional distribution of arsenic in shallow groundwater of the Bengal Basin, *Environmental Science and Technology*, 42, 2283-2288, 2008.
91. Auffan, M., J. Rose, O. Proux, D. Borschneck, A. Masion, P. Chaurand, J.L. Hazemann, C. Chaneac, J.P. Jolivet, M. Wiesner, A. van Geen, J.Y. Bottero, Enhanced adsorption of arsenic onto maghemite nanoparticles: As(III) as a probe of the surface structure and heterogeneity, *Langmuir* 24, 3215-3222, 2008.
90. Horneman, A., M. Stute, P. Schlosser, W. Smethie Jr, N. Santella, B. Mailloux, E. Gorman, Y. Zheng, and A. van Geen, Degradation of CFC-11, CFC-12 and CFC-113 in anoxic shallow aquifers of Araihasar, Bangladesh, *Journal of Contaminant Hydrology* 97, 27-41, 2008.
89. Métral, J., L. Charlet, S. Bureau, S. B. Mallik, S. Chakraborty, K.M. Ahmed, M.W. Rahman, Z. Cheng, and A. van Geen, Comparison of dissolved and particulate arsenic distributions in shallow aquifers of Chakdaha, India, and Araihasar, Bangladesh, *Geochemical Transactions* 9:1 doi:10.1186/1467-4866-9-1, 2008.
88. Weinman, B, SL Goodbred Jr., Y. Zheng, Z. Aziz, M Steckler, A van Geen, AK Singhvi, YC Nagar. Contributions of floodplain stratigraphy and evolution to the spatial patterns of groundwater arsenic in Araihasar, Bangladesh. *Geological Society of America Bulletin*, 120, 1567-1580, 2008.
87. van Geen, A., Z. Cheng, Q. Jia, A. A. Seddique, M. W. Rahman, M. M. Rahman, and K. M. Ahmed, Monitoring 51 deep community wells in Araihasar, Bangladesh, for up to 5 years: Implications for arsenic mitigation, *Journal of Environmental Science and Health Part A* 42, 1729-1740, 2007.
86. Marchitto, T.M., S. J. Lehman, J. D. Ortiz, J. Flückiger, A. van Geen, Marine radiocarbon evidence for the mechanism of deglacial atmospheric CO₂ rise, *Science* 316, 1456-1459, 2007.

85. Hafeman, D., P. Factor-Litvak, Z. Cheng, A. van Geen, H. Ahsan, Association between manganese exposure through drinking water and infant mortality in Bangladesh, *Environmental Health Perspectives* 115, 1107-1112, 2007.
84. Radloff, K.A., Z. Cheng, M.W. Rahman, K.M. Ahmed, B.J. Mailloux, A.R. Juhl, P. Schlosser, and A. van Geen. Mobilization of arsenic during one-year incubations of grey aquifer sands from Araihaazar, Bangladesh, *Environmental Science and Technology* 41, 3639-3645, 2007.
83. Chen, Y., A. van Geen, J. Graziano, A. Pfaff, M. Madajewicz, F. Parvez, I. Hussain, Z. Cheng, V. Slavkovich, T. Islam, and H. Ahsan, Reduction in urinary arsenic levels in response to arsenic mitigation in Araihaazar, Bangladesh, *Environmental Health Perspectives* 115, 917-923, 2007.
82. Stute, M., Y. Zheng, P. Schlosser, A. Horneman, R.K. Dhar, M. A. Hoque, A. A. Seddique, M. Shamsudduha, K. M. Ahmed, and A. van Geen, Hydrological control of As concentrations in Bangladesh groundwater, *Water Resources Research* 43, W09417, doi:10.1029/2005WR004499, 2007
81. Chen, Y., P. Factor-Litvak, G.R. Howe, J.H. Graziano, P. Brandt-Rauf, F. Parvez, A. van Geen, and H. Ahsan, Arsenic exposure from drinking water, dietary intakes of B vitamins and folate, and risk of high blood pressure in Bangladesh: A population-based, cross-sectional study, *American Journal of Epidemiology* 165, 541-552, 2007.
80. Hall, M., M. Gamble, V. Slavkovich, X. Liu, D. Levy, Z. Cheng, A. van Geen, M. Yunus, M. Rahman, J.R. Pilsner, J. Graziano, Determinants of arsenic metabolism: Blood arsenic metabolites, plasma folate, cobalamin, and homocysteine concentrations in maternal-newborn pairs, *Environmental Health Perspectives* 115, 1503-1509, 2007.
79. Wasserman, G.A., Liu, X., Parvez, F., Ahsan, H., Factor-Litvak, P., Kline, J., van Geen, A., Slavkovich, V., LoIacono, N.J., Levy, D., Cheng Z., Graziano, J.H., Water arsenic exposure and intellectual function in 6-year-old children in Araihaazar, Bangladesh, *Environmental Health Perspectives* 115, 285-289, 2007.
78. Madajewicz, M., A. Pfaff, A. van Geen, J. Graziano, I. Hussein, H. Momotaj, R. Sylvi, and H. Ahsan, Can information alone both improve awareness and change behavior? Response to arsenic contamination of groundwater in Bangladesh, *Journal of Development Economics* 84, 731-754, 2007.
77. Cheng, Z., B.M. Buckley, B. Katz, W. Wright, R. Bailey, K.T. Smith, A. van Geen, Arsenic in tree rings at a highly contaminated site, *Science of the Total Environment* 376, 324-334, 2007.
76. Opar, A., A. Pfaff, A. A. Seddique, K. M. Ahmed, J. H. Graziano, and A. van Geen, Responses of 6500 households to arsenic mitigation in Araihaazar, Bangladesh, *Health & Place* 13, 164-172, 2007.

75. Chen, Y., M. Hall, J. H. Graziano, V. Slavkovich, A. van Geen, F. Parvez, and H. Ahsan, A prospective study of blood selenium levels and the risk of arsenic-related premalignant skin lesions, *Cancer Epidemiology, Biomarkers and Prevention* 16, 207-213, 2007.
74. van Geen, A., M. Trevisani, J. Immel, Md. Jakariya, N. Osman, Z. Cheng, A. Gelman, and K.M. Ahmed, Targeting low-arsenic groundwater with mobile-phone technology in Araihaazar, *J. Health Population and Nutrition* 24, 282-297, 2006.
73. Ahmed, M.F., S. Ahuja, M. Alauddin, S. J. Hug, J.R. Lloyd, A. Pfaff, T. Pichler, C. Saltikov, M. Stute, and A. van Geen, Ensuring safe drinking water in Bangladesh, *Science* 314, 1687-1688, 2006.
72. Hall, M., Y. Chen, H. Ahsan, V. Slavkovich, A. van Geen, F. Parvez and J. Graziano, Blood arsenic as a biomarker of arsenic exposure: results from a prospective study, *Toxicology* 225, 225-233, 2006.
71. van Geen, A., Y. Zheng, Z. Cheng, H. Yi, R. Dhar, J. M. Garnier, J. Rose, A. A. Seddique, M. A. Hoque, and K.M. Ahmed, Impact of irrigation with groundwater elevated in arsenic on rice paddies in Bangladesh, *Science of the Total Environment* 367, 769-777, 2006.
70. Ahsan, H., A., Y. Chen, F. Parvez, L. Zablotska, M. Argos, A.Z.M. Iftikhar Hussain, H. Momotaj, D. Levy, Z. Cheng, V. Slavkovich, A. van Geen, G.R. Howe, J.H. Graziano, Arsenic exposure from drinking water and risk of premalignant skin lesions in Bangladesh: Baseline results from the Health Effects of Arsenic Longitudinal Study (HEALS), *American Journal of Epidemiology* 163, 1138-1148, 2006.
69. Dean, W. E., Y. Zheng, J. D. Ortiz, and A. van Geen, Sediment Cd and Mo accumulation in the oxygen-minimum zone off western Baja California linked to global climate over the past 52 kyr, *Paleoceanography* 21, PA4209, doi:10.1029/2005PA001239, 2006.
68. van Geen, A., W. M. Smethie, Jr., A. Horneman, and H. Lee, Sensitivity of the North Pacific oxygen minimum zone to changes in ocean circulation: A simple model calibrated by chlorofluorocarbons, *J. Geophys. Res.* 111, C10004, doi:10.1029/2005JC00319, 2006.
67. Chen, Y., J. H. Graziano, F. Parvez, I. Hussain, H. Momotaj, A. van Geen, G. R. Howe, H. Ahsan, Modification of risk of arsenic-induced skin lesions by sunlight exposure, smoking, and occupational exposures in Bangladesh, *Epidemiology* 17, 459-467, 2006.
66. Parvez F, Chen Y, Argos M, Hussain AZMI, Momotaj H, Dhar R, van Geen A, Graziano JH, Ahsan H, Prevalence of arsenic exposure from drinking water and awareness of its health risks in a Bangladeshi population: Results from a large population-based study, *Environmental Health Perspectives* 114, 355-359, 2006.
65. Ahsan H, Chen Y, Parvez F, Argos M, Hussain I, Momotaj H, Levy D, van Geen A, Howe, G., Graziano J, Health Effects of Arsenic Longitudinal Study (HEALS): Description

of a multidisciplinary epidemiologic investigation, *J. Exposure Science and Environmental Epidemiology* 16, 191-205, 2006.

64. van Geen, A., Y. Zheng, Z. Cheng, Z. Aziz, A. Horneman, R. K. Dhar, B. Mailloux, M. Stute, B. Weinman, S. Goodbred, A. A. Seddique, M. A. Hoque, and K. M. Ahmed, A transect of groundwater and sediment properties in Araihaazar, Bangladesh: Further evidence of decoupling between As and Fe mobilization, *Chemical Geology* 228, 85-96, 2006.

63. Wasserman, G. A., X. Liu, F. Parvez, H. Ahsan, D. Levy, P. Factor-Litvak, J. Kline, A. van Geen, V. Slavkovich, N. J. LoIacono, Z. Cheng, Y. Zheng, J. H. Graziano, Water manganese exposure and children's intellectual function in Araihaazar, Bangladesh, *Environmental Health Perspectives*, 114, 124-129, 2006.

62. Sigman, D.M., J. Granger, P. DiFiore, M. Lehmann, R. Ho, G. Cane, and A. van Geen, Coupled nitrogen and oxygen isotope measurements of nitrate along the North Pacific margin, *Global Biogeochemical Cycles*, 19, GB4022, doi: 10.1029/2005 GB002458, 2005.

61. Thorat, S., J. Rose, J. M. Garnier, A. van Geen, P. Refait, A. Traverse, E. Fonda, D. Nahon, and J. Y. Bottero, XAS study of iron and arsenic speciation during Fe(II) oxidation in the presence of As(III), *Environmental Science and Technology*, 39, 9478-9485, 2005.

60. Cheng, Z., A. van Geen, R. Louis, N. Nikolaidis, and R. Bailey, Removal of methylated arsenic from groundwater with iron filings, *Environmental Science and Technology*, 39, 7662-7666, 2005.

59. Zheng, Y., A. van Geen, M. Stute, R. Dhar, Z. Mo, Z. Cheng, A. Horneman, I. Gavrieli, H.J. Simpson, R. Versteeg, M. Steckler, A. Grazioli-Venier, S. Goodbred, M. Shahnewaz, M. Shamsudduha, M. Hoque, and K. M. Ahmed, Geochemical and hydrogeological contrasts between shallow and deeper aquifers in two villages of Araihaazar, Bangladesh: Implications for deeper aquifers as drinking water sources, *Geochim. Cosmochim. Acta*, 69(22), 5203-5218, 2005.

58. Hafeman, D.M., H. Ahsan, E.D. Louis, A.B. Siddique, V. Slavkovich, Z. Cheng, A. van Geen, J.H. Graziano, Association between arsenic exposure and a measure of subclinical sensory neuropathy in Bangladesh, *Journal of Occupational and Environmental Medicine*, 47, 778-784, 2005.

57. Cheng, Z., A. van Geen, A. A. Seddique, and K.M. Ahmed, Limited temporal variability of arsenic concentration in 20 wells monitored for 3 years in Araihaazar, Bangladesh, *Environmental Science and Technology*, 39(13); 4759-4766, 2005.

56. Chase, Z., B. Hales, T. J. Cowles, R. Schwartz, and A. van Geen, Distribution and variability of iron input to Oregon coastal waters during the upwelling season, *Journal of Geophysical Research*, 110, Art. No. C10S12, 2005

55. van Geen, A., Z.Cheng, A. A. Seddique, M. A. Hoque, A. Gelman, J. H. Graziano, H. Ahsan, F. Parvez, and K.M. Ahmed, Reliability of a commercial kit to test groundwater for arsenic in Bangladesh, *Environmental Science and Technology*, 39(1); 299-303, 2005.
54. Hales, B., A. van Geen, and T. Takahashi, High-frequency measurement of seawater chemistry: flow-injection analysis of macronutrients, *Limnology and Oceanography: Methods*, 2, 91-101, 2004.
53. Dhar, R. K. Y. Zheng, J. Rubenstone, and A. van Geen, Rapid spectrophotometric determination of dissolved inorganic arsenic in groundwater, *Analytica Chimica Acta*, 526, 206-209, 2004.
52. Gelman, A., M. Trevisani, H. Lu, and A. van Geen. Direct data manipulation for local decision analysis, as applied to the problem of arsenic in drinking water from tube wells in Bangladesh, *Risk Analysis*, 24, 1597-1612, 2004.
51. van Geen, A., T. Protus, Z. Cheng, A. Horneman, A.A. Seddique, Hoque, M.A., and K.M. Ahmed, Testing groundwater for arsenic in Bangladesh before installing a well, *Environmental Science and Technology*, 38(24); 6783-6789, 2004.
50. Takesue, R. and A. van Geen, Bivalve Mg/Ca, Sr/Ca, and stable isotopes: potential paleo-environmental proxies in a northern California upwelling region, *Geochimica et Cosmochimica Acta*, 68, 3845-3861, 2004.
49. Cheng, Z., Y. Zheng, R. Mortlock, A. van Geen, Rapid multi-element analysis of groundwater by high-resolution inductively coupled plasma mass spectrometry, *Analytical and Bioanalytical Chemistry*, 379: 513-518, 2004.
48. Horneman, A., A. van Geen, D. Kent, P. E. Mathe, Y. Zheng, R. K. Dhar, S. O'Connell, M. Hoque, Z. Aziz, M. Shamsudduha, A. Seddique, and K. M. Ahmed, Decoupling of As and Fe release to Bangladesh groundwater under reducing conditions. Part I: Evidence from sediment profiles, *Geochimica et Cosmochimica Acta*, 68, 3459-3473, 2004.
47. van Geen, A., S. Thorai, J. Rose, J. M. Garnier, Y. Zheng, and J. Y. Bottero, Decoupling of As and Fe release to Bangladesh groundwater under reducing conditions. Part II: Evidence from sediment incubations, *Geochimica et Cosmochimica Acta*, 68, 3475-3486, 2004.
46. Cheng, Z., A. van Geen, C. Jing, X. Meng, A.A. Seddique, K.M. Ahmed, Performance of a household-level arsenic removal system during 4-month deployments in Bangladesh, *Environmental Science and Technology*, 38, 3442-3448, 2004.
45. Ortiz, J.D., S.E. O'Connell, J. DelViscio, W. Dean, J.D. Carriquiry, T. Marchitto, Y. Zheng, and A. van Geen, Enhanced marine productivity off western North America during warm climate intervals of the past 52 kyr, *Geology*, 32, 521-524, 2004.

44. Wasserman, G.A., X. Liu, F. Parvez, H. Ahsan, P. Factor-Litvak, A. van Geen, Z. Cheng, V. Slavkovich, I. Hussain, H. Momotaj, J. H. Graziano, Water arsenic exposure and children's intellectual function in Araihaazar, Bangladesh, *Environmental Health Perspectives*, 112: 1329-1333, 2004.
43. Takesue, R. K., A. van Geen, J. D. Carriquiry, E. Ortiz, L. Godínez-Orta, I. Granados, M. Saldivar, L. Ortlieb, R. Escibano, N. Guzman, J. C. Castilla, M. Varas, M. Salamanca, C. Figueroa, Influence of coastal upwelling and El Niño-Southern Oscillation on nearshore water along Baja California and Chile: Shore-based monitoring during 1997-2000, *J. Geophys. Res.*, 109, C03009, doi: 10.1029/2003JC001856, 2004.
42. Zheng, Y., M. Stute, A. van Geen, I. Gavrieli, R. Dhar, H. J. Simpson, P. Schlosser, and K. M. Ahmed, Redox control of arsenic mobilization in Bangladesh groundwater, *Applied Geochemistry*, 19, 201-214, 2004.
41. van Geen, A., Y. Zheng, J. M. Bernhard, K. G. Cannariato, J. Carriquiry, W. E. Dean, B. W. Eakins, J. Pike and other participants 1999 RV *Melville* Baja California cruise, On the preservation of laminated sediments along the western margin of North America, *Paleoceanography*, 18, 1098, 10.1029/2003PA000911, 2003.
40. van Geen, A., K. M. Ahmed, A. A. Seddique, and M. Shamsudduha, Community wells to mitigate the current arsenic crisis in Bangladesh, *Bulletin of the World Health Organization*, 82, 632-638, 2003.
39. Emile-Geay, J., M. A. Cane, N. Naik, R. Seager, A. C. Clement, and A. van Geen, Warren revisited: Atmospheric freshwater fluxes and "Why is no deep water formed in the North Pacific", *J. Geophys. Res. Oceans*, 108, 3178, doi:10.1029/2001JC001058, 2003.
38. van Geen, Y. Zheng, R. Versteeg, M. Stute, A. Horneman, R. Dhar, M. Steckler, A. Gelman, C. Small, H. Ahsan, J. Graziano, I. Hussein, and K. M. Ahmed, Spatial variability of arsenic in 6000 tube wells in a 25 km² area of Bangladesh, *Water Resources Research*, 39(5), 1140, doi:10.1029/2002WR001617, 2003.
37. Sigman, D. M., R. Robinson, A. N. Knapp, A. van Geen, D. C. McCorkle, J. A. Brandes, R. C. Thunell, Distinguishing between water column and sedimentary denitrification in the Santa Barbara Basin using the stable isotopes of nitrate, *G3 (Geochemistry, Geophysics, Geosystems)*, 4, 1040, doi:10.1029/2002GC000384, 2003.
36. van Geen, A., H. Ahsan, A. H. Horneman, R. K. Dhar, Y. Zheng, I. Hussain, K. M. Ahmed, A. Gelman, M. Stute, H. J. Simpson, S. Wallace, C. Small, F. Parvez, V. Slavkovich, N. J. Lolacano, M. Becker, Z. Cheng, H. Momotaj, M. Shahnewaz, A. A. Seddique, and J. H. Graziano, Promotion of well-switching to mitigate the current arsenic crisis in Bangladesh, *Bulletin of the World Health Organization*, 81, 732-737, 2002.

35. Chase Z, van Geen A, Kosro PM, Marra J, Wheeler PA, Iron, nutrient, and phytoplankton distributions in Oregon coastal waters, *J. Geophys. Res. (Oceans)*, 107 (C10): art. no. 3174 SEP-OCT 2002.
34. Zheng Y., Anderson R.F., van Geen A., Fleisher M.Q., Remobilization of authigenic uranium in marine sediments by bioturbation, *Geochimica et Cosmochimica Acta*, 66 (10): 1759-1772, 2002.
33. Zheng Y, Anderson RF, van Geen A, Fleisher MQ, Preservation of particulate non-lithogenic uranium in marine sediments, *Geochimica et Cosmochimica Acta*, 66 (17): 3085-3092 SEP 2002.
32. Takesue, R., and A. van Geen, Nearshore circulation during upwelling inferred from the distribution of dissolved cadmium off the Oregon coast, *Limnology and Oceanography*, 41: 176-185, 2002.
31. Pailler D., E. Bard, F. Rostek, Y. Zheng, R. Mortlock, and A. van Geen, Burial of redox-sensitive metals and organic matter in the equatorial Indian Ocean linked to precession, *Geochim. Cosmochim. Acta*, 66, 849-865, 2002.
30. Ahsan H, Perrin M, Rahman A, Hasnat A, Parvez MF, Brandt-Rauf P, Zheng Y, Stute, M, van Geen A, Graziano J, Association between drinking water and urinary arsenic levels and skin lesions in Bangladesh, *J. Occup. Environ. Med.* 42(12): 1195-1201, 2000.
29. Zheng, Y., A. van Geen, R. F. Anderson, J. V. Gardner, and W. E. Dean, Intensification of the northeast Pacific oxygen minimum zone during the Bolling/Allerod warm period, *Paleoceanography*, 15, 528-536, 2000.
28. Zheng, Y., R. F. Anderson, A. van Geen, and J. S. Kuwabara, Controls of authigenic Mo formation in marine sediment: Linkage to pore water sulfide, *Geochim. Cosmochim. Acta*, 64, 4165-4178, 2000.
27. van Geen, A., R. Takesue, J. Goddard, T. Takahashi, J. A. Barth, and R. L. Smith, Carbon and nutrient dynamics during coastal upwelling off Cape Blanco, Oregon, *Deep-Sea Research II*, 47, 975-1002, 2000.
26. van Geen, A., R. Takesue, and Z. Chase, Acid mine tailings in southern Spain, Special issue on Aznalcollar mining accident, J. Grimalt, Ed., *Science of the Total Environment*, 242, 221-229, 1999.
25. Kuwabara, J. S., A. van Geen, D. C. McCorkle, and J. M. Bernhard, Dissolved sulfide distributions in the water column and sediment pore waters of the Santa Barbara basin, *Geochim. Cosmochim. Acta*, 63, 2199-2209, 1999.
24. van Geen, A., and S. N. Luoma, The impact of human activities on sediments of San Francisco Bay: An overview, *Marine Chemistry*, 64, 1-6, 1999.

23. Fuller, C. C., A. van Geen, M. Baskaran, R. Anima, Sediment chronology in San Francisco Bay, California, defined by ^{210}Pb , ^{234}Th , ^{137}Cs , and $^{239,240}\text{Pu}$, *Marine Chemistry*, 64, 7-27, 1999.
22. van Geen, A., N. Valette-Silver, S. N. Luoma, F. Tera, and J. Klein, Constraints on the sedimentation history of San Francisco Bay from ^{10}Be and ^{14}C , *Marine Chemistry*, 64, 29-38, 1999.
21. Hornberger, M., S. N. Luoma, A. van Geen, C. Fuller and R. Anima, Historical trends of trace metals in the sediments of San Francisco Bay, California, *Marine Chemistry*, 64, 39-55, 1999.
20. van Geen, A. and S. N. Luoma, A record of estuarine water column contamination from the Cd content of foraminiferal tests in San Francisco Bay, California, *Marine Chemistry*, 64, 57-69, 1999.
19. Venkatesan, M.I., R. P. de Leon, A. van Geen, and S. N. Luoma, Chlorinated hydrocarbon pesticides and polychlorinated biphenyls in sediment cores from San Francisco Bay, *Marine Chemistry*, 64, 85-97, 1999.
18. Pereira, W.E., F. D. Hostettler, S. N. Luoma, and A. van Geen, Sedimentary record of anthropogenic and biogenic polycyclic aromatic hydrocarbons in San Francisco Bay, California, *Marine Chemistry*, 64, 99-113, 1999.
17. Hostettler, F. D., W. E. Pereira, K. A. Kvenfolden, A. van Geen, and S. N. Luoma, A record of contaminant input to San Francisco Bay as traced by biomarker profiles in surface sediments and sediment cores, *Marine Chemistry*, 64, 115-127, 1999.
16. van Geen, A., and Z. Chase, Recent spill adds to contamination of southern Spain, *EOS, Transactions of the American Geophysical Union*, v. 79, 449 & 455, 1998 (not an abstract).
15. Luoma, S. N., A. van Geen, B. G. Lee, J. E. Cloern, and J. Thompson, Metal uptake by phytoplankton during a bloom in South San Francisco Bay: Implications for metal cycling in estuaries, *Limnology and Oceanography*, 43, 1007-1016, 1998.
14. van Geen, A., J. F. Adkins, E. A. Boyle, C. H. Nelson, and A. Palanques, A 120-yr record of widespread contamination from mining of the Iberian pyrite belt, *Geology*, 25, 291-294, 1997.
13. van Geen, A., R. G. Fairbanks, P. Dartnell, M. McGann, J. V. Gardner, M. Kashgarian, Ventilation changes in the northeast Pacific during the last deglaciation, *Paleoceanography*, 11, 519-528, 1996.

12. Lynch-Stieglitz, J., A. van Geen, and R. G. Fairbanks, Inter-ocean exchange of Glacial North Atlantic Intermediate Water: Evidence from Subantarctic Cd/Ca and carbon isotope measurements, *Paleoceanography*, 11, 191-201, 1996.
11. van Geen, A., and D. M. Husby, Cadmium in the California Current: Tracer of past and present upwelling, *J. Geophys. Res. (Oceans)*, 101, 3489-3507, 1996.
10. van Geen, A., D. C. McCorkle, and G. P Klinkhammer, Sensitivity of the phosphate-cadmium-carbon isotope relation in the ocean to cadmium removal by suboxic sediments, *Paleoceanography*, 10, 159-170, 1995.
9. van Geen, A., A. P. Robertson, and J. O. Leckie, Complexation of carbonate species at the goethite surface: Implications for adsorption of metal ions in natural waters, *Geochim. Cosmochim. Acta*, 58, 2073-2086, 1994.
8. van Geen, A., and S. N. Luoma, Trace metals Cd, Cu, Ni, Zn and nutrients in coastal waters adjacent to San Francisco Bay, California, *Estuaries*, 16, 559-566, 1993.
7. van Geen, A., S. N. Luoma, C. C. Fuller, R. Anima, H. E. Clifton, S. Trumbore, Evidence from Cd/Ca ratios in foraminifera for greater upwelling off California 4,000 years ago, *Nature*, 358, 54-56, 1992.
6. van Geen, A., E.A. Boyle and W.S. Moore, Trace metal enrichments in waters of the Gulf of Cadiz, Spain, *Geochim. Cosmochim. Acta*, 55, 2173-2191, 1991.
5. van Geen, A., and E. Boyle, Automated preconcentration of trace metals from sea water and fresh water, *Analytical Chemistry*, 62, 1705-1709, 1990.
4. van Geen, A., and E. Boyle, Variability of trace metal fluxes through the Strait of Gibraltar, *Palaeogeogr. Palaeoclimat. Palaeoecol.*, 89, 65-79, 1990.
3. van Geen, A., E. Boyle and P. Rosener, Entrainment of trace-metal-enriched Atlantic shelf-water in the inflow to the Mediterranean Sea, *Nature*, 331, 423-426, 1988.
2. Boyle, E. A., B. Handy and A. van Geen, Cobalt determination in natural waters using cation-exchange liquid chromatography with luminol chemiluminescence detection, *Analytical Chemistry*, 59, 1499-1503, 1987.
1. Hedges, J. I., and A. van Geen, A comparison of lignin and stable carbon isotope compositions in Quaternary marine sediments, *Marine Chemistry*, 11, 43-54, 1982.

Peer-reviewed conference volumes:

4. Trevisani M, J Shen, A van Geen, A Gelman, S Ehrenberg, J Immel. Safe depth forecasting model for insuring tubewell installations against arsenic risk in Bangladesh.

Computational Science and Its Applications – ICCSA 2017. 17th International Conference, Trieste, Italy, July 3-6, 2017, Proceedings, Part V. O. Gervasi et al. (Eds.): ICCSA 2017, Part V, LNCS 10408, pp. 3–19, 2017.

3. van Geen, A., Z. Aziz, A. Horneman, B. Weinman, R.K. Dhar, Y. Zheng, S. Goodbred, R. Versteeg, A.A. Seddique, M. A. Hoque, K.M. Ahmed, Preliminary evidence of a link between surface soil properties and the arsenic content of shallow groundwater in Bangladesh, *Journal of Geochemical Exploration*, 88, 157-161, 2006.

2. Nikolaidis, N.P., Z. Cheng, A. van Geen, Removal of arsenic from Bangladesh groundwater with iron filings, In: *Advances in Arsenic Research: Integration of Experimental and Observational Studies and Implications for Mitigation*. Eds. P. A. O'Day, D. Vlassopoulos, X. Meng, and L. G. Benning, ACS Symposium Series, vol. 915. American Chemical Society, Washington, D.C., 2005.

1. van Geen, A. and R. Takesue, Past and present coastal upwelling along the western Americas, In: *Reconstructing Ocean History: A Window into the Future*, Proceedings of the 6th International Conference on Paleoceanography, F. Abrantes and A. Mix, Eds., 399-418, 1999.

Scientific Correspondence

4. van Geen, A., J. M. Duxbury, Comment on “Growing rice aerobically markedly decreases arsenic accumulation”, *Environmental Science and Technology*, DOI: 10.1021/es9002982, 2009.

3. Cheng, Z., A. van Geen, A. A. Seddique, and K.M. Ahmed, Response to comments on "Limited temporal variability of arsenic concentration in 20 wells monitored for 3 years in Araihaazar, Bangladesh", *Environmental Science and Technology*, 40, 1718-1720, 2006.

2. van Geen, A., Z.Cheng, A. A. Seddique, M. A. Hoque, A. Gelman, J. H. Graziano, H. Ahsan, F. Parvez, and K.M. Ahmed, Response to comment on “Reliability of a commercial kit to test groundwater for arsenic in Bangladesh”, *Environmental Science and Technology*, 39; 5503-5504, 2005.

1. van Geen, A., Y. Zheng, M. Stute, and K. M. Ahmed, Comment on “Arsenic mobility and groundwater extraction in Bangladesh” (II), *Science*, 300, 584, 2003.

Editorials/Workshop reports

4. van Geen, A, International Drilling to Recover Aquifer sands (IDRAs) and arsenic contaminated groundwater in Asia, *Scientific Drilling* 12, 49-52, 2011.

3. van Geen, A. Arsenic meets dense populations, *Nature Geoscience* 1, 494-496, 2008.

2. van Geen, A., J. H. Graziano, and K. M. Ahmed, Bangladesh's deadly wells, *New York Times* Op-Ed page, July 30, 2005, *International Herald Tribune*, August 1, 2005.

1. Graziano, J.H. and A. van Geen, Reducing arsenic exposure from drinking water: Different settings call for different approaches, *Environmental Health Perspectives* 113 (6), A360-361, 2005.