

PROGRAM

15th International Conference of the Pacific Basin Consortium for Environment and Health

“Environmental Exposure in Indigenous Communities”

24-27 September, 2013

East-West Center, Honolulu, Hawaii

PBC is grateful for and would like to acknowledge the sponsorship of:

AusAID

East-West Center

National Institute of Environmental Health Sciences

CIHR Institute of Aboriginal Peoples' Health

Children's Health and Environment Program

PROGRAM OVERVIEW

15th International Conference of the Pacific Basin Consortium for Environment and Health
September 24-27, 2013. East-West Center, Honolulu, Hawaii

Tuesday 24 September 2013			
Time	Session Details		
13:00-16:30	Training Workshop I Children's Environmental Health <i>Pago Pago Room</i>	Training Workshop II Integrated Environmental Health IMPACT Assessment <i>Sarimanok Room</i>	Training Workshop III Water Systems, rural areas and Indigenous people <i>Kaniela Room</i>
18:00-20:00	Welcome Reception <i>Garden Level - Wailana</i>		

Wednesday 25 September 2013		
Time	Session Details	
08:00-10:00	Opening Ceremony <i>Keoni Auditorium</i>	
10:00-10:30	Morning Tea (Garden Level – Wailana)	
10:30-12:30	Plenary Session Reducing the dangers from exposure to arsenic <i>Keoni Auditorium</i>	
12:30-13:30	Lunch (Garden Level – Makana)	
13:30-15:00	Poster Viewing & Discussion <i>Garden Level - Wailana</i>	
15:00-15:30	Afternoon Tea (Garden Level – Wailana)	
15:30-17:00	Symposium Water Remediation and Re-Use <i>Asia Room</i>	Symposium Hazardous Waste <i>Keoni Auditorium</i>
17:00-18:30	Student Presentation Session <i>Sarimanok Room</i>	

Thursday 26 September 2013			
Time	Session		
08:30-10:30	Plenary Session The WHO project on E-Waste Keoni Auditorium		
10:30-11:00	Morning Tea (Garden Level – Wailana)		
11:00-12:00	Major Symposium Reducing the dangers from exposure to Lead Asia Room		
12:00-13:00	Lunch (Garden Level – Makana)		
13:00-15:00	Symposium Bioremediation of hazardous waste Keoni Auditorium	Symposium Air pollution: Particles, source, composition, exposure and health Asia Room	
15:00-15:30	Afternoon Tea (Garden Level – Wailana)		
15:30-17:30	Symposium WHO programs and emerging issues in the Pacific Basin Sarimanok Room	Symposium Nanotechnology and toxicology Keoni Auditorium	Symposium Water remediation and re-use/ Bioremediation Asia Room
17:30-18:00	PBC Annual General Meeting Tagore Meeting Room		

Friday 27 September 2013			
Time	Session		
08:30-10:30	Plenary Session Environmental Exposures in Indigenous Communities <i>Keoni Auditorium</i>		
10:30-11:00	Morning Tea (Garden Level – Wailana)		
11:00-13:00	Major symposium Policy implications and responses to environmental exposures in the 21 st century <i>Keoni Auditorium</i>		
13:00-14:00	Lunch (Garden Level – Makana)		
14:00-17:30	Major symposium Developing a Framework for Socially Responsible Mining <i>Keoni Auditorium</i>		
17:30-17:45	Close of the 15th Annual Conference of the Pacific Basin Consortium for Environment and Health <i>Keoni Auditorium</i>		

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Training Workshops **13:00-16:30**

Children's Environmental Health **Maria Neira, Leith Sly, David Carpenter, Peter D. Sly** **Pago Pago Room**

Children are amongst the most vulnerable members of our society and are particularly vulnerable to adverse environmental exposures. In general, they receive a higher "dose" of toxicants in a given environment, are less able to neutralize toxicants and live long enough for diseases with long latency periods to manifest. This workshop will cover the principles underlying the vulnerability of children and will highlight risks in specific environments.

Integrated Environmental Health IMPACT Assessment **Paul Jagals, Colleen Lau** **Sarimanok Room**

Assessing and managing health impact caused by environmental exposures of any population is a complex process. To enhance understanding and application of impact assessment and management based on multiple environmental exposures in populations such as indigenous populations (with increased and varying layers of vulnerabilities and susceptibilities), it is necessary to understand the integrative impact assessment process required to achieve meaningful results.

This workshop will discuss how environmental exposures posing risks associated with health outcomes are best assessed within an Integrated Environmental Health Impact Assessment process.

Water Systems, Rural Areas and Indigenous People **Robert Arnold, Kyoung-Woong Kim** **Maryanne Leblanc, Min Jang, Patrick Mette, Michael Hoffmann, Vasiliki Karanikola** **Kaniela Room**

Water is becoming an increasingly scarce resource throughout the world. Sustainable use of water, including appropriate treatment and recycling, is critical to our well being. Workshop presentations will highlight experiences in providing affordable, low maintenance solutions to water supply and water/sanitation in areas without access to advanced technical solutions.

Welcome Reception **18:00-20:00**

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Opening Ceremony Keoni Auditorium	
08:00-08:30	Welcome to the East-West Center <i>Charles E. Morrison, President, East-West Center</i>
08:30-09:15	25 Years of the PBC. Looking back to move forward <i>William Suk, National Institute of Environmental Health Sciences</i>
09:15-10:00	The potential health impact of exposure to environmental pollutants in children <i>Professor Dr. Her Royal Highness Princess Chulabhorn Mahidol, Chulabhorn Research Institute</i>
10:00-10:30 Morning Tea – Garden Level: Wailana	
Plenary Session: Reducing the Dangers from Exposure to Arsenic Session Chair: Joseph Graziano Keoni Auditorium	
10:30-10:50	Health hazards and mitigation of chronic poisoning from arsenic in drinking water: Taiwan experiences <i>Chien-Jen Chen, National Taiwan University</i>
10:50-11:10	The long-term health and cancer impacts of in utero and childhood arsenic exposure <i>Craig Steinmaus, University of California</i>
11:10-11:30	Health effects of arsenic and prevention: the Bangladesh experience <i>Habibul Ahsan, University of Chicago</i>
11:30-11:50	Mechanisms for arsenic-induced pathogenic vascular and metabolic tissue remodelling <i>Aaron Barchowsky, University of Pittsburgh</i>
11:50-12:10	Nutritional influences on arsenic metabolism and toxicity <i>Mary Gamble, Columbia University</i>
12:10-12:30	Prenatal arsenic exposure and shifts in the fetal proteome <i>Rebecca Fry, University of North Carolina</i>
12:30-13:30 Lunch – Garden Level: Makana	
Poster Viewing & Discussion Session Chairs: Danielle Carlin, Michelle Heacock Garden Level: Wailana	
P1	The importance of inter-individual differences in inorganic arsenic metabolism for birth weight outcome <i>Kathleen McCarty, Yale University</i>
P2	Chemicals: foes and friends <i>Kirpal Singh</i>
P3	E-waste: Impacts, issues and management strategies <i>Saniea Mumtaz, Society for Conservation of Environment & Sustainable Development</i>
P4	Spatial distribution of persistent organic pollutants in the surface water of river Brahmaputra and river Ganga in India <i>Paromita Chakraborty, SRM University</i>
P5	Mercury poisoning dentistry <i>Mahmood Khwaja, Sustainable Development Policy Institute</i>
P6	Nutritional modulation of polychlorinated biphenyl toxicity. <i>Michael Petriello, University of Kentucky</i>
P7	Nutrients and genetic polymorphisms modify arsenic metabolism efficiency <i>Lizbeth López-Carrillo, Instituto Nacional de Salud Pública</i>
P8	Environmental knowledge and behaviour among Head Start employees and parents following environmental health training in Webb County Tx <i>Amber Brooke Trueblood, Texas A&M Health Science Center</i>
P9	Cadmium exposure in different age groups and implications for health – a review <i>Anna Callan, Edith Cowan University</i>
P10	Arsenic metabolism and renal function in an arsenic-exposed population in Bangladesh <i>Brandilyn Peters, Dept. of Environmental Health Sciences (EHS)</i>
P11	Assessment of household air pollution (HAP) and respiratory health effects among indigenous tribal communities in Odisha, India <i>Bijaya Kumar Padhi, Asian Institute of Public Health</i>
P12	Urinary creatinine: the grand enigma – implications of its use as a urine dilution adjustment factor in epidemiologic studies <i>Megan Hall, Columbia University</i>
P13	Geospatial analysis of soil lead and children’s blood lead levels in artisanal industry communities: A cast study <i>Anne Reiderer, Blacksmith Institute</i>

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P14	Prenatal exposure to endocrine disrupting compounds in a predominantly Caribbean immigrant community <i>Rolf Halden, Arizona State University</i>
P15	Assessment of health risks associated with arsenic exposure from rice contamination nearby closed mines <i>Won-Il Kim, National Academy of Agricultural Science</i>
P16	Safety standards of radionuclides in food established after the accident of the nuclear power plant and report on current situation of exposure and management of radionuclides <i>Fujio Kayama, Jichi Medical University</i>
P17	Fetal exposure to the dietary contaminant PAH dibenzo (<i>def,p</i>) chrysene and adult on-set lung non-small cell cancer and t-cell acute lymphoblastic leukemia utilizing a CYP1B1 humanized mouse model <i>Erin Madeen, Oregon State University</i>
P18	Interaction of silver nanoparticles with Kaolinite: heteroaggregation <i>Hyun-A Kim, Gwangju Institute of Science and Technology</i>
P19	Comparison of attitudes and behaviours following a pesticide education intervention in two Hispanic communities <i>Jennifer Ross, Texas A&M Health Science Center</i>
P20	Fate of Gallium arsenide in electronic waste in municipal landfills <i>Adriana Ramos-Ruiz, University of Arizona</i>
P21	Respiratory Health Risk Assessment of children living close to industrial areas in Indonesia <i>Indah R S Salami, Institute of Technology Bandung</i>
P22	Health assessment of Indigenous children in Mexico <i>Evelyn Van Brussel, Universidad Autónoma de San Luis Potosi</i>
P23	Bioaccumulation of veterinary antibiotics in crops <i>Sung-Chul Kim, Chungnam National University</i>
P24	Estimating the risk of diarrhea from heterogeneous water use: A case study from a longitudinal cohort of children in Indonesia <i>Laura Sima, Johns Hopkins University</i>
P25	Health risks associated with increasing rain frequency: Linking proximity to open sewers, drinking water contamination and longitudinal diarrheal frequency in children <i>Laura Sima, Johns Hopkins University</i>
P26	Pedestrian exposures to traffic pollutants at the U.S-Mexico border – An environmental justice issue <i>Vanessa E. Galaviz, University of Washington</i>
P27	The potential role of human clinical detoxification of environmental chemicals: A review of the literature and presentation of pilot data <i>Jason Allen, Bastyr University</i>
P28	Assessing bacteria colonization of plant roots for bio-indicators of phytostabilization sustainability using fluorescent in situ hybridization <i>Linnea Herbertson, University of Arizona</i>
P29	Exposure assessment of school children to airborne Asbestos in Khyber Pakhtunkhawa Pakistan <i>Noor Jehan, University of Swabi</i>
15:00-15:30	Afternoon Tea - Garden Level: Wailana
Symposium: Water Remediation and Re-Use Session Chair: Robert Arnold Asia Room	
15:30-16:00	The World Bank <i>Maryanne Leblanc, World Bank</i>
16:00-16:30	Development of a self-contained, PV-powered domestic toilet and electrochemical wastewater treatment system suitable for the developing world with traditional urban infrastructure <i>Michael Hoffmann, California Institute of Technology</i>
16:30-16:45	Climate change and managing water crisis: Pakistan's perspective <i>Mumtaz Hussain, Society for Conservation of Environment & Sustainable Development</i>
16:45-17:00	Environmental health impact of unconventional gas extraction on water resources: considering the strength of the evidence <i>Paul Jagals, University of Queensland</i>

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Symposium: Hazardous Waste	
Session Chairs: Mahmood Khwaja, Rajendra Prasad	
Keoni Auditorium	
15:30-15:55	Remediation of Mercury contaminated soil-A case study <i>Tapan Chakrabarti, National Environmental Engineering Research Institute</i>
15:55-16:15	Magnetic nanocomposite microparticles for on/off binding of persistent organic pollutants from water sources <i>Bradley Newsome, University of Kentucky</i>
16:15-16:35	Modelling the emission sources for polychlorinated biphenyls in India: implications for human health risk assessment <i>Paromita Chakraborty, SRM University</i>
16:35-17:00	Bacterial sRNAs and their role in mineralization of organophosphates and nitrophenols <i>Dayananda Siddavattam, University of Hyderabad</i>

Student Presentation Session	
Session Chairs: Danielle Carlin, Michelle Heacock	
Sarimanok Room	
17:00-17:15	Bioprecipitation of arsenic in sulphur rich waters <i>Lucia Rodriguez-Freiere, University of Arizona</i>
17:15-17:30	Solar membrane distillation: clean water for remote areas of the Navajo reservation <i>Vasiliki Karanikola, University of Arizona</i>
17:30-17:45	Groundwater arsenic contamination and social implication in the Mekong river basin of Cambodia <i>Kongkea Phan, Gwangju Institute of Science and Technology</i>
17:45-18:00	Expression of MTBE-degradation genes of <i>Methylibium petroleiphilum</i> PM1 and their abundance in groundwater <i>Geetika Joshi, University of California, Davis</i>
18:00-18:15	Application of laser induced breakdown spectroscopy (LIBS) for heavy metal determination in soil <i>Ki-Rak Kim, Gwangju Institute of Science and Technology</i>
18:15-18:30	Mass flows of contaminants of emerging concern in US biosolids and chemical fate in outdoor soil mesocosms <i>Arjun Venkatesan, Arizona State University</i>

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Plenary Session: The WHO project on E-Waste Session Chairs: Maria Neira, Professor Dr. Her Royal Highness Princess Chulabhorn Mahidol Keoni Auditorium	
08:30-09:00	Setting the scene for the WHO project <i>Maria Neira, World Health Organization</i>
09:00-09:30	The health impacts of E-Waste <i>Martin van den Berg, Institute for Risk Assessment Sciences</i>
09:30-10:00	E-Waste - socioeconomic and policy factors <i>Fernando Diaz Barriga, University of San Luis Potosí</i>
10:00-10:30	General Discussion
10:30-11:00 Morning Tea - Garden Level: Wailana	
Major Symposium: Reducing the Dangers from Exposure to Lead Session Chair: Bruce Lanphear Asia Room	
11:00-11:30	Crime of the century: Our failure to prevent the Lead pandemic <i>Bruce Lanphear, Simon Fraser University</i>
11:30-11:45	Internal exposure to heavy metals in Japanese children from Asahikawa <i>Cimi Ilmiawati, Jichi Medical University</i>
11:45-12:00	Comparative study on various single extractions by characteristic of Pb extractability <i>Hyeopjo Han, Gwangju Institute of Science and Technology</i>
12:00-13:00 Lunch – Garden Level: Makana	
Symposium: Bioremediation of Hazardous Waste Session Chair: Kyoung-Woong Kim Keoni Auditorium	
13:00-13:20	Coal mine drainage sludge and its application for treating metallic mine effluent <i>Min Jang, University of Malaya</i>
13:20-13:40	Comparative study of simultaneous removal of arsenic and heavy metals using different combinations of electrokinetics with bioleaching <i>Hyun-A Kim, Gwangju Institute of Science and Technology</i>
13:40-14:00	How arsenic fate is coupled to sulphur biomineral formation in landfills <i>Sahar Fathordoorbadi, University of Arizona</i>
14:00-14:20	Nanotechnology in environmental remediation: degradation of volatile organic compounds over visible light active nanostructured materials <i>Rengaraj Selvaraj, Sultan Qaboos University</i>
14:20-14:40	Microorganism assisted Phytoremediation of heavy metal and endosulfan contaminated soil <i>Tapan Chakrabarti, National Environmental Engineering Research Institute</i>
14:40-15:00	Degradation of 4-chlorophenol, an endocrine disruptor using mesoporous Fe ₂ O ₃ /TiO ₂ Photocatalyst <i>Murugesan Velayutham, B. S. Abdur Rahman University</i>
Symposium: Air pollution: Particles, Source, Composition, Exposure and Health Session Chair: Andrea Hinwood Asia Room	
13:00-13:25	Global BC emissions, transport and health effects <i>Shu Tao, Peking University</i>
13:25-13:50	Particulate air pollution and cardiovascular disease <i>Bin Jalaludin, NSW University</i>
13:50-14:15	PM10 and metals, personal exposure of children living in different settings <i>Andrea Hinwood, Edith Cowan University</i>
14:15-14:30	Adapting technology acceptance and simplification models for sharing environmental research with the general public <i>Andrew Larkin, Oregon State University</i>
14:30-14:45	Fine particles characterisation in residential homes located in different microenvironment of India <i>Ajay Taneja, Dr. B.R. Ambedkar University</i>
14:45-15:00	Chemical exposure and respiratory health of children in an industrial setting <i>Kathleen McCarty, Yale University</i>
15:00-15:30 Afternoon Tea - Garden Level: Wailana	

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Symposium: WHO Programs and Emerging Issues in the Pacific Basin

Session Chair: Nasir Hassan

Sarimanok Room

15:30-15:55	WHO Programs in the West Pacific <i>Nasir Hassan, World Health Organization</i>
15:55-16:20	Combating infectious diseases in the Pacific Islands: Elimination programs, emergence, and outbreaks <i>Colleen Lau, University of Queensland</i>
16:20-16:40	Challenges and opportunities in the analysis of environmental exposure <i>Michelle Heacock, National Institute of Environmental Health Sciences</i>
16:40-17:00	Health vulnerability to Dengue hemorrhagic fever and malaria in response to climate change <i>Budi Haryanto, University of Indonesia</i>
17:00-17:15	Projected health impacts of heat events in Washington State associated with climate change <i>Michael Yost, University of Washington</i>
17:15-17:30	Flame retardant exposures and health effects in pregnant women and children <i>Brenda Eskenazi, Center for Environmental Research and Children's Health</i>

Symposium: Nanotechnology and Toxicology

Session Chair: Ian Kennedy

Keoni Auditorium

15:30-15:50	Linking physical and chemical properties to biology <i>Kent Pinkerton, University of California, Davis</i>
15:50-16:10	Nano-toxicology and -technology: New Findings from the NIEHS and Superfund Research Program Scientific Community <i>Danielle Carlin, National Institute of Environmental Health Sciences</i>
16:10-16:30	Toxicity of inhaled combustion derived ultrafine particles in the neonatal and adult lung <i>Laura van Winkle, University of California, Davis</i>
16:30-16:50	Engineered nanomaterials for studies of inhalation toxicology <i>Ian Kennedy, University of California, Davis</i>
16:50-17:10	Mechanisms and biomarkers of cadmium-induced olfactory injury in fish <i>Evan Gallagher, University of Washington</i>
17:10-17:30	Role of sulphide in attenuating ZnO nanoparticle inhibition to anaerobic sludge <i>Jorge Gonzalez-Estrella, University of Arizona</i>

Symposium: Water Remediation and Re-Use/Bioremediation

Session Chair: Robert Arnold

Asia Room

15:30-15:45	Effective utilization of waste water through recycling, reuse and remediation for sustainable agriculture <i>Rajamani Raman, Annamalai University</i>
15:45-16:00	Genesis and delineation of high nitrate groundwater in the Thar desert, Pakistan <i>Tahir Rafique, Applied Chemistry Research Center</i>
16:00-16:15	Application of AMDS mortar as a treatment agent for arsenic in subsurface environment <i>Jaeyoung Choi, Gangneung Institute</i>
16:15-16:30	Conversion of bio wastes into wealth as organic manure for ever green agriculture <i>Rajamani Raman, Annamalai University</i>
16:30-16:45	Adsorption of arsenate from aqueous solution by calcined Mg/Al Layered Double Hydroxide <i>Sang Ho Lee, Gwangju Institute of Science and Technology</i>
16:45-17:00	Scaling assisted phytostabilization from the greenhouse to the field at the Iron King Mine-Humboldt Smelter Superfund Site <i>Juliana Gil-Loaiza, University of Arizona</i>
17:00-17:15	A novel magnetic Fe ₃ O ₄ /SiO ₂ core-shell nanorods for the removal of arsenic <i>Murugesan Velayutham, B. S. Abdur Rahman University</i>
17:15-17:30	A new geospatial tool for delineating groundwater vulnerability in Hawaii: current progress and potential applications <i>Seo Jin Ki, University of Hawaii at Manoa</i>

17:30-18:00	Annual General Meeting of the Pacific Basin Consortium for Environment and Health Tagore Meeting Room
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Friday 27 September 2013

Plenary Session: Environmental Exposures in Indigenous Communities

Session Chairs: Malcolm King, Peter D. Sly
Keoni Auditorium

08:30-08:40	Introduction <i>Malcolm King, CIHR Institute of Aboriginal Peoples' Health</i>
08:40-09:00	Effects and changes in the health of the ecosystem downstream from the oil sands <i>Elder François Paulette, Stanton Territorial Health Authority Elders Council</i>
09:00-09:20	Environmental remediation of oil sands water <i>Lee Wilson, University of Saskatchewan</i>
09:20-09:40	Persistent organic pollutants and diabetes in Canada <i>Scott Venners, Simon Fraser University Health Sciences</i>
09:40-10:00	Community-based research and policy engagement to protect health on St. Lawrence Island, Alaska <i>Viola Waghiyi, Alaska Community Action on Toxics</i>
10:00-10:20	International perspectives <i>David Carpenter, University of Albany</i>
10:20-10:30	Wrap up and Discussion

10:30-11:00 Morning Tea – Garden Level: Wailana

Major symposium: Policy Implications and Responses to Environmental Exposures in the 21st Century

Session Chairs: Nancy Lewis, Todd Maiden
Keoni Auditorium

11:00-11:30	Community-based approaches to Global Environmental Health Research <i>Gwen W. Collman, National Institute of Environmental Health Sciences</i>
11:30-13:00	Overview and introduction for panel discussion <i>Todd Maiden, Reed Smith LLP</i>
Panel Members: Todd Maiden, Fernando Diaz Barriga, William Suk, Bruce Lanphear	

13:00-14:00 Lunch – Garden Level: Makana

Major symposium: Developing a Framework for Socially Responsible Mining

Session Chairs: Jim Field, Raina Maier
Keoni Auditorium

14:00-14:40	Overview: our global dependence on mining and how the social aspects of mining have become the biggest factor limiting mining operations <i>Mary Poulton, University of Arizona</i>
14:40-15:20	Social aspects and impacts of mining <i>Fernando Diaz-Barriga, University of San Luis Potosí</i>
15:20-15:40	Tea Break – Garden Level: Wailana
15:40-16:20	Mining and the rights of indigenous peoples <i>James Hopkins, University of Arizona</i>
16:20-17:00	Artisanal mining and effects on environmental quality <i>Bern Klein, University of BC</i>
17:00-17:15	Bioavailability, release kinetics, and molecular speciation of arsenic and lead in geo-dusts from the Iron King Mine Federal Superfund Site in Humboldt, Arizona <i>Nazune Menka, University of Arizona</i>
17:15-17:30	Modeling the emission, transport and deposition of contaminated dust from a mine tailing site <i>Michael Stovern, University of Arizona</i>

Close of the 15th Annual Conference of the PBC for Environment and Health

Keoni Auditorium

17:30-17:45	Peter D. Sly, Chair, Pacific Basin Consortium for Environment and Health
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