Annals of Global Health, VOL. 83, NO. 1, 2017
January–February 2017: 88–93

associations between diet's blue WF (i.e. irrigation) and socio-demographic characteristics were assessed.

Findings: The food items with the highest blue WF (per tonne) in India are nuts and seeds, vegetable oils and meat products, whereas the foods with the lowest blue WF in India are mostly fruits and vegetables. However, there are wide spatial variations in the food and animal product WFs. The average total WF of diets was roughly 20% blue WF, and the rest consisting of green water consumption (i.e. rainfall). Wheat is the highest contributor to the average dietary blue WF, followed by rice. The dietary blue water footprint was associated with a number of factors, with region being the greatest predictor of dietary blue WF. Blue WFs of diets of was highest in northern participants and lowest in southern, largely due to greater wheat consumption in the north. The WF of urban diets was greater than that of rural diets, even after adjusting for total calories. Higher standard of living was also associated with more blue water demanding diets, in both calories and composition.

Interpretation: The WF of diets in India varies between social and geographical groups. Further study should consider local impact by combining WFs with data on water availability and scarcity. Optimisation techniques can be used to establish trade-offs and co-benefits for sustainable diet recommendations.

Source of Funding: This study forms part of the Sustainable and Healthy Diets in India (SAHDI) project supported by the Wellcome Trust Our Planet, Our Health programme (Grant number 103932).

Abstract #: *1.005_PLA*

A Novel Approach to One Health Education and Collaboration across Academic Institutions and the Public/Private Sector

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Program/Project Purpose: The interinstitutional One Health course introduces the concept of One Health as an important approach to a holistic understanding of the prevention of disease and the maintenance of human, animal and environmental health.

The goal of the course is to create a platform that brings together students, faculty and professionals from varied disciplines, whilst fostering transdisciplinary discussion and out of the box thinking to address health at the human, animal and environmental interface. The overriding focus of the course includes the bi-directional impact of animal health on human health, environmental impacts on the health of animals and people, and the mutual benefits of comparative medicine.

Course objectives include: (1) understanding how different disciplines contribute to the discipline of One Health, (2) creatively designing interdisciplinary interventions to improve local/global health using a One Health model, and (3) establishing one health relevant networks among professionals in North Carolina and beyond.

Structure/Method/Design: The One Health course is cross-listed at three academic institutions namely: Duke University, UNC Chapel Hill and North Carolina State University. The inter-institutional course includes a weekly multi-campus discussion-based seminar and networking sessions (for students, faculty and professionals), held off-site at the private non-profit North Carolina Biotechnology Center (NC Biotech), followed by a weekly student-centered but instructor guided, focused discussion via video conferencing from each of the three participating campuses. Partnership with NC Biotech ensures diverse high quality professional engagement whilst providing a neutral platform for collaborative discussions and networking. Expert professional speakers are selected from across North Carolina, the United States and internationally.

Outcome & Evaluation: Course evaluations demonstrate an increased interest for one health education amongst students in addition to the growing desire for practical one health engagement opportunities. Students mention a revolutionized perspective towards health and their long-term academic, career and professional choices. Others incorporate in their course work holistic approaches to health, whilst others upon graduation, have enrolled in graduate level institutions offering certification or degrees in one health.

Going Forward: Increasing intra and inter university dialogue for one health education approaches in curricular design, training and service opportunities. Increasing student opportunities for practical engagement in one health oriented programs. Increasing dialogue for one health education and systems thinking approaches.

Source of Funding: None.

Abstract #: *1.006_PLA*

GEOHealth - The Caribbean Consortium for Research in Environmental and Occupational Health: Environmental Health Science Research Training in Suriname

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Program/Project Purpose: Suriname and other Caribbean Region countries suffer a triple public health burden: high perinatal mortality, environmental contamination, and a lack of environmental policies. *The Caribbean Consortium for Research in Environmental and Occupational Health* (CCREOH) is designed to examine the impact of exposures to neurotoxicants on maternal and child health and increase research capability. Tulane University (TU), the Academic Hospital Paramaribo Scientific Research Center Suriname and Anton de Kom University of Suriname (AdeKUS) are collaborating to strengthen global environmental and occupational health (EOH) research capacity specifically in Suriname and the Caribbean Region.

Structure/Method/Design: CCREOH features a portfolio of short-, intermediate – and long-term training. CCREOH has as

its anchor an existing joint AdeKUS/TU Master of Science in Public Health (MSPH) program. The Caribbean Public Health Agency (CARPHA) is a regional network to engage other countries with similar EOH threats and to disseminate findings.

Outcome & Evaluation: To date, almost 60 graduates are embedded in Suriname's research, medical and public health enterprise. Under the CCREOH short-term research-training umbrella, Surinamese laboratory scientists learned various cell-culture techniques in Tulane's EOH labs. At the mid-career level certificates in EOH and Industrial Hygiene are building critical capacity. A special CCREOH deliverable is a cadre of 5 Surinamese team members pursuing a new hybrid AdeKUS/Tulane PhD degree. In addition, two Surinamese MDs are in advanced stages of PhD training in EOH at TU. All candidates are pursuing research foci commensurate to CCREOH's area of scientific inquiry: examining the impact of exposures to Hg, Cd, Pb, and pesticides and early childhood neurodevelopment. A 2017 Caribbean EOH research workshop on climate change is scheduled.

Going Forward: CCREOH was awarded a GEOHealth hub to assess the impact of environmental exposures on 1000 maternal-child dyads recruited during pregnancy and followed prospectively through four years of age in Suriname (U01-Suriname) complemented by a robust research training portfolio (U2R-Tulane).

Source of Funding: NIH/FIC: 1U2RTW010104-01, and 1U01TW010087-01.

Abstract #: *1.007_PLA*

Piloting a Model for Holistic Environmental Contamination Assessment that Could Be Implemented by Community Scientists

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Background: Zambia has vast mineral resources that contribute to the country's gross domestic product, but often have negative impacts on the communities that surround the mines. Kabwe is the location of a former lead and zinc mine open between 1906 and 1994; its environmental impacts are still affecting the surrounding communities. Despite numerous remediation efforts in the past 20 years, individual studies repeatedly have shown high lead blood levels of children and widespread soil contamination.

Methods: Given that people live in the impoverished areas surrounding the mine, it is critical to understand the pathways of exposure. Towards this end we conducted a pilot study collaborating across 7 disciplines and 5 institutions (2 Zambian, 3 American) to explore the feasibility of using discrete methodologies that would enable partnerships with citizen-scientists to gather holistic environmental health data and trace pathways of contamination, which would lead to collaborative and targeted amelioration efforts. Our pilot study involved teaching non-specialists methods for sampling air particles, dust from homes, soils, edible plants, water from multiple sources in the low-income communities closest to the mines.

Findings: As expected, soil lead concentrations were high, ranging from 227 to over 2800 mg/kg and decreased with increasing distance from the mine, however household water supply contaminations did not follow the same geographic logic. Lead, cadmium, and chromium in stored in four houses, were as high as 2.07, 0.969 and 0.108 mg/L, respectively, 690, 19 and 10 times the WHO guidelines. The reported sources of these waters were shallow wells and municipal supplies although none of our public samples found high metal concentrations, suggesting contamination is from another source. Our study also involved exploring the residents' openness to health surveys and willingness to collaborate on future efforts to assess and address local environmental health concerns. We were greeted with widespread enthusiasm for the project and availability of under-employed, educated community members eager to find solutions to their local environmental health problems.

Interpretation: Our findings suggest this holistic approach will simultaneously yield interesting data allowing the tracing of pathways of contamination, and will facilitate a collaborative research project with local citizen scientists.

Source of Funding: Global Health Research Innovation Center, Miami University (Oxford, Ohio).

Abstract #: *1.008_PLA*

Implementing Planetary Health Competencies into Medical Education

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Program/Project Purpose: Planetary health is an emerging field in medicine dealing with the health of human civilization and the state of the natural systems on which it depends. It is the health of human civilisation and the state of the natural systems on which it depends. It has found its way into the curricula of school children and has now moved up into UME and GME. Richard Horton, editor of The Lancet, gave the keynote speech, "Making the Case for Planetary Health: Why and How" at the 2016 Consortium of Universities for Global Health (CUGH) conference.

The Rockefeller Foundation's investments in Planetary Health are dedicated to influence both international and national approaches to health through advocacy and education. Our program created a platform to introduce the concept of planetary health to family physicians and others along the continuum of medical education (students, residents and practicing physicians).

Structure/Method/Design: A literature review was done to understand the current concept of planetary health and the various methods in which the education was being implemented globally.