

Editorial

Dear readers,

It is a common phenomenon: Topics of crises appear and disappear on and from the news following the acuteness of the word "crisis" which implies an only temporary state. This however is misleading as the consequences and implications involved in many crises are often protracted and can involve different areas of human life which are associated with one another: economy, politics and health.

Climate change or the migrant flows are examples of global health issues that have acute but first and foremost long term implications for multiple areas of human life all of which are not even foreseeable for us today.

The CVV has picked exactly these two topics - migration and climate change - and combined them to one joined topic with a particular focus on the implications for Public Health. What to some readers may sound like a forced wedding of two independent public health problems is in fact an interesting debate how these topics are and have been connected for a longer time already. The CVV-conference "Climate migration & health" which is held in the French embassy in Berlin on June 10 intends to illustrate exactly this relationship between the two topics.

Thus, the CVV is delighted to continue its tradition of workshop series and conferences covering topics of public and global health relevance by serving as a mediating platform for the exchange and network of representatives of science, politics, civil society and industry from France, Germany and abroad.

We hope you enjoy the conference!

Elke Schaeffner

Labour migration as an adaptation of climate change: health implications

by Aline Philibert



Photo: Aline Philibert

In Africa, climate change is expected to amplify the intensity and frequency of drought or flooding (1), whose uncertainty makes increasingly difficult to predict fluctuations in crop yield and livestock feeding resources. For subsistence agriculture that continues today in large parts of rural Africa, uncertainty of food supply may, in the absence of well-functioning credit or an efficient food provision system, put households at risk for food insecurity. As a result, many people have chosen to diversify their livelihoods both occupationally and geographically rather than to invest in sustainable agriculture (2). Recognized as an alternative

coping strategy to climate change, labor migration became an opportunity to compensate for crop failures and uncertainties in livestock productivity by offering a shelter against risks of income shocks (2). While for the most part migrants remain internal and seasonal, there is a significant and growing phenomenon of international migration (3). Seasonal migration is a significant component of the economic life of rural dwellers, which are most dependent on rain-fed subsistence. Seasonal migrants are mainly men who leave to work elsewhere outside the crop-growing season (4). This usually disrupts the familiar unit and raises the workload on the shoulder of women, resulting in maternal and neonatal health issues (3). With the new window of opportunities offered by urbanization and mining sector, men are less likely to return home during crop-growing season (3). Urbanization, which first concerns men and eventually the whole family, maybe a health hazard with poor overcrowding housing, unhealthy and hazardous locations, and social exclusion (6). Lack of safe water supply increases the probability of epidemics propagation in urban areas (7). At the same time urbanization in low-income countries may increase access to health facilities and encourage health-seeking behavior (8). The increasing demand for minerals worldwide has encouraged the mining activities as a mean to supplement agriculture income. Those activities are often linked with neurocognitive and physical injuries, respiratory diseases and epidemics (HIV-AIDS & TB) (9). Cultural loss, violence, alcoholism and prostitution are other issues raised by the mining activities (8). Seen as an adaptive strategy to alleviate health deficits posed by climate change, labor migration maybe also a source of human suffering and adverse health outcomes.

[References page 3 >>>](#)

Contents

CLIMATE CHANGE P.1
CENTRE VIRCHOW-VILLERMÉ P.2

EDUCATION P.2
RESEARCH P.3

ZOOM P.4

CVV INTERN

CVV Berlin integrated into the Institute of Public Health

Since January 2016, the Berlin subsidiary of the Centre Virchow-Villermé has been integral part of the Charité Institute of Public Health (IPH), directed by Tobias Kurth. The mission of the IPH is to improve population health at local, national and global level by

excellent and innovative teaching and research in Public Health. The IPH is part of the Charité Center for Health and Human Sciences and unites under one roof (1) research, (2) teaching at the Berlin School of Public Health and (3) the Centre Virchow-Villermé for Public Health Paris-Berlin. This structure and the dual functions of Tobias Kurth (co-director for CVV and director of the IPH), Elke Schäffner (co-director for CVV and professor at IPH) and Susanne Stöckemann

(project and communication management for CVV and IPH) will facilitate in the future the development of collaborations between Charité and French institutions in the fields of teaching and research in Public Health.

Elected

Tobias Kurth has been named member of the Scientific Advisory Board of the French School of Public Health EHESP.

EDUCATION



Summerschool Global Health and Local Knowledge: Learning from Case Studies

20. - 23. September 2016, Berlin

The Institute of Public Health, Charité – Universitätsmedizin Berlin, the Centre Virchow-Villermé and Chiba University from Japan jointly organize a summerschool about global health interventions in local contexts. Lecturer from Japan, France, United States, Netherlands and Germany aim to explicate social and cultural factors that need to be evaluated and considered when thinking about global health interventions in local contexts. This summerschool particularly

enables students to understand culture as tacit knowledge that underlies all behaviours, including those of global health players and health professionals. The course will guide students to critically reflect the assumptions and tools used in public and global health and to understand the possible implications of the paradigms underlying global health.

Contact: Christine.holmberg@charite.de

EDGE International Summer School Politics of the Earth

4. - 9. September 2016, Paris

The Centre Virchow-Villermé is part of the organising committee of the EDGE (Environmental Diplomacy and Geopolitics) International Summer School, which will take place in Paris from September 4 to September 9. This summer school is part of the interdisciplinary programme “Politics of the earth” initiated by Université Sorbonne Paris Cité and is dedicated to graduate students and PhD candidates from all disciplines. The summer school programme combines na-



tural sciences and social sciences and seeks to provide students with a framework to think the Earth and the World together. The sessions of the first day will be dedicated to “Facing disasters”, on day two “Politics of climate change” will be addressed, on day three the link between environment and human health will be questioned, on day four politics of biodiversity will be overviewed, and finally, on day five it is the “Urbanization and environmental challenges: diverse perspectives from North and South” that will be addressed. Two other summer schools will be organised by the members of the EDGE project, at the University of Economics in Bratislava (EUBA) and at the University of Liège (ULg) in order to foster students and researchers mobility within these countries.

Link: <http://www.politiquesdelaterre.fr/> ,
Contact: Stefanie.schutte@parisdescartes.fr

IN SHORT
MOOClive

In June 2016, the CVV, under the auspices of the Université Sorbonne Paris Cité and together with several public, academics and industrial partners, won the IDEFI-N ANR call for project. The awarded project, entitled #MOOCLive, aims at developing a MOOC Factory for training in Public and Global Health. One of the work packages, dedicated to International Health Regulations and targeted towards policy makers, already started. As often demonstrated, the International Health Regulations (HIR) fail on organising coordinated global answers to major recent global health threats (Ebola, and Zika as the most recent examples). This work package has been developed to fill-in the lack of high profile training on the topic. A serious game, IHR Simulator 3.0, has already been developed for WHO and a first test of the Simulator was done last March 23-24 at Lyon, and more recently, during the World Health Assembly, on May 23, 2016 at Geneva. 60 representatives from member’s countries of the international organization were volunteers to play with a simulated global health crisis. Each participant had a randomly attributed role on his smartphone, tablet or computer and had to take decisions accordingly to its role. Questions such as: “Does an interministerial taskforce has to be settled up?” “How should the policy maker of the country communicate information on the case?” “Should borders be closed?”, were tested. All the participants’ answers were then pooled according to the various roles, and analysed in real time. The results of this session were assessed in reference to compliance to IHR. Last May, this virtual epidemic would have led to 2000 deaths from 100,000 infected people. A subdued result that highlights the real and urgent need of developing a coordinated training on the topic, as underlined by Prof. Antoine Flahault after the exercise. During the next months, a set of MOOCs targeting specific and general audiences will be developed at the Centre. All of them will fulfil educational needs on key topics of global and public health such as: violence against women, tobacco cessation in vulnerable segments of population, health inequity, addiction. More information can be found on www.virchowvillermé.eu.

RESEARCH

Association between migraine and the risk of developing Parkinson's disease

by Claire Carpenet, PHD-student at CVV Berlin

Scientific understandings

Migraine is a primary headache disorder and ranked as one of the most disabling neurological diseases in adulthood. The one year prevalence of migraine is 6% in men and 18% in women. Typical headache attacks last several hours involving nausea and sensitivity to light or sound. In about one third of cases, transient neurological symptoms occurs, most often affecting the visual system, which are known as migraine aura. Migraine pathophysiology involves complex neuronal cascades that may be triggered by environmental, and genetic factors.

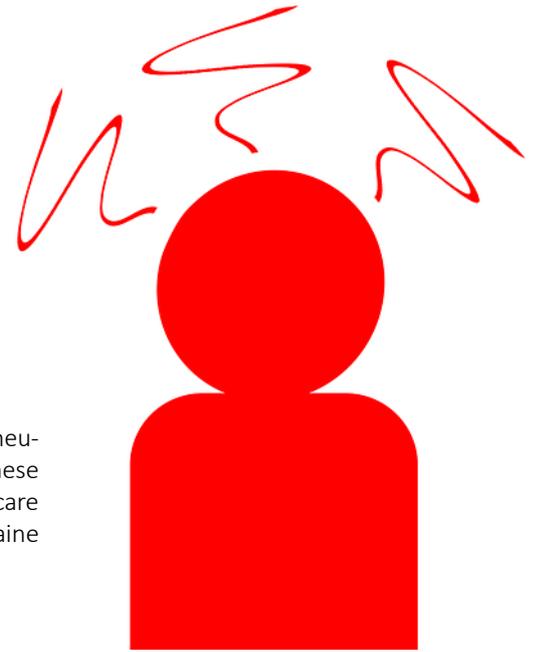
Parkinson's disease (PD) is a neurodegenerative disease mainly affecting the motor system. It results from the death of dopamine-generating cells in the substantia nigra. The causes of this cell death are poorly understood. PD is the second most common neurodegenerative disorder after Alzheimer's disease and affects approximately seven million people globally. The costs of Parkinson's Disease to society are high. As both migraine and PD are disorders of the brain and involve some similar mechanisms, it has been speculated that migraine may be a risk factor for PD. However, only recently a large population-based study

found an association between the two neurological disorders. Confirmation of these findings are urgently needed as the care and treatment of patients with migraine may be affected (1).

Study design

As a PhD student in Public Health specialising in Neuroepidemiology my focus is to assess causes and consequences of migraine suffering. The main association I want to test in this study is whether migraine increases the risk of PD. In order to address this problematic I am conducting a longitudinal study on two large scale population-based cohorts, approved by the Internal Review Board of the Brigham and Women's Hospital, the Physician Health Study and the Women's health study.

The Physicians' Health Study was a randomized, double-blind, placebo-controlled trial to test the benefits and risks of low-dose aspirin (325 mg) and beta-carotene (50 mg) in the primary prevention of cardiovascular disease (CVD) and cancer among 22,071 apparently healthy male physicians aged 40 to 84 years at baseline in 1982. Baseline information was self-reported



and follow-up information was collected annually by mailed questionnaires.

The WHS was a randomized trial designed to test the benefits and risks of low-dose aspirin and vitamin E in the primary prevention of CVD and cancer on a total of 39,876 US female health professionals aged 45 years at study entry (1992–1995). Baseline information was self-reported and collected by a mailed questionnaire that asked about many cardiovascular risk factors and lifestyle variables. Participants were sent follow-up questionnaires asking about study outcomes and other information during the study period.

(1) Scher AI, Ross GW, Sigurdsson S, Garcia M, Gudmundsson LS, Sveinbjörnsdóttir S, et al. Midlife migraine and late-life parkinsonism: AGES-Reykjavik study. *Neurology*. 2014 Sep 30;83(14):1246–52.

>>> References, article page 1:

(1) IPCC, 2013: Summary for Policymakers. In: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA (Armah et al. 2010).

(2) Armah, F. A., Obiri, S., Yawson, D. O., Onumah, E. E., Yengoh, G. T., Afrifa, E. K. et al. (2010) Anthropogenic sources and environmentally relevant concentrations of heavy metals in surface water of a mining district in Ghana: a multivariate statistical approach. *Journal of Environmental Science and Health, Part A, Toxic/Hazardous Substances & Environmental Engineering* 45,1804-1813.

(3) Philibert A, Tourigny C, Coulibaly A, Fourrier P. (2013). Birth seasonality as a response to a changing rural environment (Kayes region, Mali). *Journal of Biosciences*, 45(4):547-65. doi: 10.1017/S0021932012000703.

(4) Agadjanian, V., Yabiku, S. T. & Cau, B. (2011) Men's migration and women's fertility in rural Mozambique. *Demography* 48, 1029–1048.

(5) Brodie Ramin (2009). *Slums, climate change and human health in sub-Saharan Africa*. *Bulletin of the World Health Organization* 2009;87:886-886. doi: 10.2471/BLT.09.073445

(6) United Nations Human Settlements Programme (2003). *The challenge of slums: global report on human settlements*. London: Earthscan Publications.

(7) Patel RB, Burke T. (2009). Urbanization – an emerging humanitarian disaster. *N England Journal of Medicine* 2009; 361: 741-3 doi: 10.1056/NEJMp0810878 pmid: 19692687.

(8) Philibert A., Ravit M., Dumont A., Bonnet E., Dossa I., Ridde V. Maternal and neonatal health impact of Obstetrical Risk Insurance scheme in Mauritania: a controlled before-and-after study. *Journal of Health policy planning (under review)*.

(9) Philibert A. and Chan H.M. A systematic review of environmental health research on impacts of mining on health and wellbeing of Indigenous Peoples (under preparation).

ZOOM

Interview with Dr. Anneliese Depoux and Prof. Tobias Kurth

Anneliese Depoux from Paris and Tobias Kurth from Berlin have complemented the directors board since January 2016

The CVV has been in operation for three years now. What, in your opinion have been the main achievements in this period?

AD: The Centre Virchow-Villermé produced in 3 years 17 MOOCs. The firsts four MOOCs were produced in partnership with INRIA and the Université Paris Descartes. Today, the entire MOOC production is done autonomously by the CVV (teacher selection, pedagogical engineering, script writing, filming and editing). By February 2016, almost 50,000 participants had participated in a MOOC produced by the CVV. When I look at the figure, I would say that the CVV has succeeded in filling educational gaps and all the team can be proud of having met this challenge. In addition to offering educational material, the CVV has become an expert in terms of MOOC production, having been successfully awarded an ANR (Agence Nationale de la Recherche) call for project IDEFI-N grant to produce the CVV #MOOCLive project.

Finally I think that one of the greatest achievement of CVV is the strong network of collaborators it has developed, among invited professors, interns and occasional collaborators, who dedicate themselves to advancing the work of the CVV.

TK: We achieved to raise awareness for the Center by organizing a series of Franco-German workshops and conferences in Berlin and Paris, attended by participants from academia, governmental, non-governmental and private organizations. These activities - to be continued in the years to come - were first steps towards our overarching goal to put the Public Health Domain on the French - German agenda and to foster leadership in European and global health aspects.

All CVV directors have different professional backgrounds. What do you think will be your contribution to the further development of the CVV?

AD: I think that it is important that interdisciplinarity, one of the key word of the CVV constitution, is represented at an executive level. This shows a real willpower in developing projects outside of the box. I will definitely contribute in reinforcing the expertise of CVV in the field of information and communications sciences that are crucial for improving public and global health policies. This should contribute on enhancing and reinforcing the CVV network and actions.

TK: I hope that I can support the CVV with my expertise in causal population health sciences and to develop teaching modules to train the next generation of experts addressing important aspects of population health.

One special feature of the CVV is the Franco-German cooperation. How do you intend to further strengthen this "unique selling proposition"?

AD: The Centre Virchow-Villermé will continue to fund researchers' mobility, especially of young researchers. I would like to develop more bilateral workshops similar to the one taking place in Berlin at the French Embassy on Climate Migration and Health. This wish is commonly shared and we will pool our efforts to strengthen this comparative scientific offer. Moreover, in Paris, we are developing a mapping of French and German public health academic actors. I will also support efforts to implement this initiative to generate greater collaboration between the French-German public health actors.

TK: We will initiate specific workshops and teaching modules that will target the need of population health sciences in both countries. We further hope to bring together research groups working in similar domains to increase the visibility of the French-German public health domain.



Anneliese Depoux

is a researcher in Information and Communication Sciences and she earned a doctorate from the University of Paris Sorbonne CELSA. She initiated, with Stefanie Schütte an interdisciplinary research group dedicated to study how to communicate on Climate Change & Health: 4CHealth. She was involved in the CVV since its foundation.

Tobias Kurth

studied medicine and graduated from the Eberhard Karls University in Tübingen and earned a Doctor of Science in Epidemiology from Harvard T.H. Chan School of Public Health. Kurth is professor and director of the Institute of Public Health of the Charité – Universitätsmedizin Berlin and adjunct professor of epidemiology at Harvard in Boston. His research interests lie in the field of neurological and cardiovascular diseases at the population level, as well as in the effects and side effects of approved drugs.



December 2015

Publisher: Charité - Universitätsmedizin Berlin and Université Sorbonne Paris Cité

Editor in chief: Jean-Yves Mérimodol, Université Sorbonne Paris Cité,

Axel Radlach Pries, Charité - Universitätsmedizin Berlin

Managing Editors: Elke Schäffner and Antoine Flahault

Concept: Sophie Puig-Malet and Susanne Stöckemann

Layout: Christine Voigts, Charité

Centre Virchow-Villermé (Germany)

Charité - Universitätsmedizin Berlin

Charitéplatz 1 | 10117 Berlin