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EDITORIAL

Towards health for future

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In the last few decades, the global climate has changed considerably due to human activity (EASAC 2019). According to the World Meteorological Organization (WMO), carbon dioxide and other major greenhouse gas emissions have continued to increase. On a global scale, the 5-year period, 2015–2019, is likely to be the warmest ever, with a 1.1 °C global temperature increase since the pre-industrial period (WMO 2019). The impact of climate change on health has been increasingly debated over the last few decades. The IJPH recognized these issues early on to be relevant for public health. The topic has been covered in a special issue Climate changes Health in 2010 and articles published since then are presented in this editorial on occasion of the international symposium on Climate Change and Health, taking place 5–6 December 2019 in Basel, Switzerland.

Heat-related mortality is, presumably, one of the most comprehensively studied consequences of climate change (Sera et al. 2019). More frequent and longer heat waves increase mortality and morbidity, as demonstrated, for example, by Cheng et al. (2014) for China and Gomez-Acebo et al. (2012) for the north of Spain. Although mostly older people are affected, social and economic factors also play an important role in vulnerability to temperature extremes (Mari-Dell'Olmo et al. 2019). Heat warning systems have been proposed as an appropriate adaptation measure, but Toloo et al. (2013) found evidence for their efficiency to be scarce in 2013. Since then, several new studies provide evidence for the health benefits of heat warning systems, although it is still not entirely clear what specific measures are most effective and how the target group is best reached (Casanueva et al. 2019).

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To elucidate the causal pattern between climate change and various health impacts is a challenge, given the many direct and indirect channels in a globalized world. Some key indicators to quantify the health impacts of climate change have been proposed by Cheng and Berry (2013a) for Canada. In Europe, several vector-borne (mosquito, sandfly and tick) and rodent-borne infections show a trend of expanding to higher latitudes and altitudes (EASAC 2019). Since 2007, several indigenous outbreaks of dengue, chikungunya, zika and West Nile fever occurred in southern Europe because of urbanization, globalization and climate trends (Semenza and Suk 2018). Nutrition security and migration are also linked to climate change in many ways (EASAC 2019). Heaney and Winter (2016) reported in an exploratory case study that drought was the primary reason for 81% of Maasai pastoralists in Tanzania who moved out of their rural homelands into the city.

There are many synergies between health promotion and climate change adaptation and mitigation measures (Cheng and Berry 2013b). One of the most illustrative examples is the promotion of non-motorized traffic for commuting. While walking and cycling result in reduced CO_2 emissions compared to private car traffic, reduced noise and air pollution emissions and increase in physical activity contribute to better health. Other examples of co-benefits are reduced meat consumption or less fossil fuel burning for heating. Nevertheless, intelligent solutions are encouraged for situations where health promotion and climate change measures are in conflict with each other. Organizing an international symposium is a typical example of such a trade-off. Arguably, mutual learning and interactions contribute to a better understanding and most efficient translation of research results into policy and actions. Nevertheless, academic institutions and health professionals are recognized as relevant actors in the issues of, and responsibility to reduce their carbon footprint and minimize the negative impact of climate change (Winkler et al. 2015).

The Swiss Tropical and Public Health Institute, Basel, has dedicated its annual winter symposium on 5–6

December 2019 to climate change and health with a focus on risk characterization, adaptation, co-benefits, vulnerabilities and resilience. The organizers are making a conscious effort to minimize travel-related CO_2 by videoconferencing in talks from some overseas speakers instead of flying them in. Further, we will offer virtual meeting participation with the possibility to interact with the session chairs and audience in real time. This is a first step and an example of important practical experience on how to organize future scientific communication with minimal climate change impact. It is the responsibility of individuals and institutions alike, to contribute to a transition towards a sustained health for the future.

References

Casanueva A et al (2019) Overview of existing heat-health warning systems in Europe. Int J Environ Res Public Health. https://doi.org/10.3390/ijerph16152657

Cheng JJ, Berry P (2013a) Development of key indicators to quantify the health impacts of climate change on Canadians. Int J Public Health 58:765–775. https://doi.org/10.1007/s00038-013-0499-5

Cheng JJ, Berry P (2013b) Health co-benefits and risks of public health adaptation strategies to climate change: a review of current literature. Int J Public Health 58:305–311. https://doi.org/10.1007/s00038-012-0422-5

Cheng J, Zhu R, Xu Z, Xu X, Wang X, Li K, Su H (2014) Temperature variation between neighboring days and mortality: a distributed lag non-linear analysis. Int J Public Health 59:923–931. https://doi.org/10.1007/s00038-014-0611-5

EASAC (2019) The imperative of climate action to protect human health in Europe. European Academies Science Advisory Council. https://easac.eu/publications/details/the-imperative-of-climate-action-to-protect-human-health-in-europe/. Accessed 11 July 2019

Gomez-Acebo I, Llorca J, Rodriguez-Cundin P, Dierssen-Sotos T (2012) Extreme temperatures and mortality in the North of Spain. Int J Public Health 57:305–313. https://doi.org/10.1007/s00038-010-0229-1

Heaney AK, Winter SJ (2016) Climate-driven migration: an exploratory case study of Maasai health perceptions and help-seeking behaviors. Int J Public Health 61:641–649. https://doi.org/10.1007/s00038-015-0759-7

Mari-Dell'Olmo M et al (2019) Social inequalities in the association between temperature and mortality in a South European context. Int J Public Health 64:27–37. https://doi.org/10.1007/s00038-018-1094-6

Semenza JC, Suk JE (2018) Vector-borne diseases and climate change: a European perspective. FEMS Microbiol Lett. https://doi.org/10.1093/femsle/fnx244

Sera F et al (2019) How urban characteristics affect vulnerability to heat and cold: a multi-country analysis. Int J Epidemiol 48:1101–1112. https://doi.org/10.1093/ije/dyz008

Toloo G, FitzGerald G, Aitken P, Verrall K, Tong S (2013) Evaluating the effectiveness of heat warning systems: systematic review of epidemiological evidence. Int J Public Health 58:667–681. https://doi.org/10.1007/s00038-013-0465-2

Winkler MS, Röösli M, Ragettli MS, Cisse G, Müller P, Utzinger J, Perez L (2015) Mitigating and adapting to climate change: a call to public health professionals. Int J Public Health 60:631–632. https://doi.org/10.1007/s00038-015-0722-7

WMO (2019) The global climate in 2015–2019. World Meteorological Organization, Geneva