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## Public health institutes and the fight against climate change

Public health actors, and especially national public health institutes (NPHIs), should play a central role in the joint actions that are urgently needed to mitigate climate change, restore nature, and adapt to new risks.<sup>1,2</sup>

NPHIs are science-based organisations operating at the national and subnational level. Their main functions include, but are not limited to, surveillance and control of health risks, early warning systems, emergency management, regulation, prevention and health promotion, community engagement, social mobilisation for health, and research. The COVID-19 pandemic has illuminated just how crucial these functions are to population wellbeing.

The functions of NPHIs are already affected by climate change worldwide.<sup>3</sup> Some are essential in designing evidence-based adaptation policies (eg, emergency preparedness and prevention) and supporting mitigation policies (eg, promotion of interventions on key determinants of health such as diets, lifestyles, or air pollution). However, so far, effective contributions of NPHIs to adaptation plans and mitigation strategies for climate change have remained limited, with a primary focus on health surveillance and response to a rather small number of risks (eg, heat, extreme weather events, and vector-borne, food-borne, and water-borne diseases).<sup>3</sup> Other public health tools such as risk assessment, social participation, health promotion, advocacy, or reductions of health inequities are underutilised.<sup>3</sup> Moreover, there are insufficient published studies reporting and discussing the efficiency of current climate change and health adaptation.<sup>4</sup>

The International Association of National Public Health Institutes has

developed a roadmap<sup>5</sup> to strengthen the role of NPHIs in climate change mitigation and adaptation policies over the next 5 years. Its priorities are the following: first, to develop advocacy actions on public health and climate change; second, to enhance capacity strengthening, competence development, and training within NPHIs; third, to increase multisectoral collaborations from the local to the international level on major environmental and social determinants of health relevant to climate actions; fourth, to support the reduction of the environmental footprint of public health services; and fifth, to monitor progress in NPHIs' involvement in climate change policies.

This roadmap also calls for results-oriented implementation research, focusing on the following: integrated analysis of the overlapping and cascading effects of climate change, development of common indicators to support adaptation and mitigation policies, evaluation of current adaptation strategies, evaluation of the health promotion tools that could support mitigation strategies, and actionable translation of the concepts of One Health and Planetary Health. Finally, NPHIs should be more involved in research on climate change and health to harness their key roles in translating science into policy and practice.

We declare no competing interests. The views expressed here are solely the responsibility of the authors and do not represent the official views of their institutions.

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- 1 The Intergovernmental Panel on Climate Change. Summary for policymakers. In: Climate change 2021: the physical science basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Geneva: Intergovernmental Panel on Climate Change, 2021.
- 2 Pörtner HO, Scholes RJ, Agard J, et al. IPBES-IPCC co-sponsored workshop report on biodiversity and climate change. Bonn: Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, 2021.
- 3 International Association of National Public Health Institutes. Survey results—the role of national public health institutes in climate change adaptation and mitigation 2021. Saint Maurice: International Association of National Public Health Institutes, 2021.
- 4 Berrang-Ford L, Sietsma AJ, Callaghan M, et al. Systematic mapping of global research on climate and health: a machine learning review. *Lancet Planet Health* 2021; 5: e514–25.
- 5 International Association of National Public Health Institutes. IANPHI roadmap for action on health and climate change—engaging and supporting National Public Health Institutes as key climate actors. Saint Maurice: International Association of National Public Health Institutes, 2021.