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| Title of PhD project / theme | Climate change health impacts and adaptations: drivers and projections |
| Supervisory team | <p>Antonio Gasparrini (LSHTM, Lead) Chris Fook Sheng Ng (Nagasaki University)</p> <p>Ana Maria Vicedo-Cabrera (University of Bern / LSHTM) Masahiro Hashizume (University of Tokyo / Nagasaki University)</p> |
| Brief description of project / theme | <p>Climate change affects health through complex interplays of weather and population-related factors. Identifying the underlying drivers that modulate these associations will contribute to understanding climate change vulnerability and the potential adaptation mechanisms. Evidence will be essential to provide reliable projections of health impacts due to climate change under specific adaptation and mitigation scenarios.</p> <p>This PhD project aims to develop a methodological framework (1) to identify the main drivers of adaptation to climate change, and (2) to quantify climate change impacts in terms of temperature-mortality projections under composite scenarios of mitigation and adaptation.</p> <p>The project entails the use of cutting-edge statistical methods to derive future temperature-mortality associations based on changes in potential drivers of vulnerability, defined by the alternative trends in socio-economic development and adaptation strategies.</p> <p>The proposed PhD work will benefit from the massive datasets collected for epidemiological analyses on climate and health through the Multi-City Multi-Country (MCC) network, encompassing more than 500 cities/communities across 29 countries. The student will be exposed to state-of-the-art epidemiological designs and statistical methodologies in environmental health research. There will be training and research opportunities that will equip the student with high-level quantitative skills.</p> <p>Related publications at: http://mccstudy.lshtm.ac.uk/publications/</p> |

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| <p>The role of LSHTM and NU in this collaborative project</p> | <p>The existing MCC network led by LSHTM in collaboration with the Nagasaki University (NU) researchers will lay the foundation and provide important expertise to the project. Additional support and transdisciplinary resources are accessible at the new Centre on Climate Change and Planetary Health at LSHTM (https://www.lshtm.ac.uk/research/centres/centre-climate-change-and-planetary-health). The leading role of the two institutions in global health provides the advantage of wide-reaching impacts. Both institutions will work together on project implementation and the dissemination of findings, and stand to benefit from contributions to high priority research topics.</p> <p>Mode of collaboration: Antonio Gasparrini (LSHTM) will lead the supervisory team and coordinate with Chris Fook Sheng Ng (NU) to work closely with Ana M. Vicedo-Cabrera and Masahiro Hashizume to train student and oversee the project to completion. Advisory committee may be identified later depending on subject matter.</p> |
| <p>Particular <i>prior</i> educational requirements for a student undertaking this project</p> | <p>The candidate should have a quantitative background (e.g. MSc in Medical Statistics, or Health Economics or Epidemiology with equivalent level of quantitative content), and prior training in epidemiology. Experience in advanced time series regression modelling, meta-analytical technique, and R statistical software is desirable.</p> |
| <p>Skills we expect a student to develop/acquire whilst pursuing this project</p> | <p>The student will develop high-level quantitative skills in data analysis and regression modelling, in particular in the analysis of complex and large datasets. At the end of the PhD, the student will master sophisticated statistical methods, such as impact projections analysis, regression analysis, and statistical computing, potentially applicable in various research areas within beyond environmental epidemiology.</p> <p>The student is also expected to gain experience to facilitate translation of epidemiological evidence into decisions for risk management, and be able to develop interdisciplinary skills linking health research and public policy.</p> |