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Borderless Heat Stress

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Heatwaves have been increasing in frequency, duration, and intensity. They have been the deadliest hydro-meteorology hazard globally for the last 5 years according to the world meteorological organisation. In addition, they are not constrained by geography in the same sense as many other hazards and as such they are borderless. They however receive less attention, research, and funding internationally than other hazards such as floods and storms, effecting how we perceive their risk and their reporting. Here we consider the impact of heatwaves by making use of the Universal Thermal Climate Index (UTCI) for indicating heat stress. The UTCI is a biometeorological index that computes thermal stress using the parameters of 2m temperature, wind speed, mean radiant temperature and relative humidity and a body model, making it a human-centric approach to assessing thermal stress and is skilful for both indicating and forecasting heat hazards. Further a comparison to how heat impacts are reported in EM-DAT (an international disasters database) and international meteorological organisation reports, supplemented by English news media reports is made to assess whether heat impacts are sufficiently reported. In addition, we refer to specific case studies of the United Kingdom, Ghana, and Uganda to further explore impacts, risk perception and policy at a country level, because although heat is borderless impacts occur on a local scale. All this together, will provide the evidence for the development a potentially global early warning system and the implementation of climate change adaptation on a local level to build adaptive capacity and resilience to the growing risk of heat stress internationally.