

EGU24-12807, updated on 20 May 2024

<https://doi.org/10.5194/egusphere-egu24-12807>

EGU General Assembly 2024

© Author(s) 2024. This work is distributed under the Creative Commons Attribution 4.0 License.



## Children disproportionately exposed to attributable heatwaves at low-latitude low-income countries

**Rosa Pietroiusti**<sup>1</sup>, Erich Fischer<sup>2</sup>, Rupert Stuart-Smith<sup>3</sup>, Luke Harrington<sup>4</sup>, Luke Grant<sup>5</sup>, Annalisa Savaresi<sup>6,7,8</sup>, Sam Adelman<sup>9</sup>, and Wim Thiery<sup>1</sup>

<sup>1</sup>Department of Water and Climate, Vrije Universiteit Brussel, Belgium (rosa.pietroiusti@vub.be)

<sup>2</sup>Institute for Atmospheric and Climate Science, ETH Zurich, Switzerland

<sup>3</sup>Oxford Sustainable Law Programme, University of Oxford, Oxford, UK

<sup>4</sup>Te Aka Ma ūtuatua School of Science, University of Waikato, Hillcrest, Hamilton, New Zealand

<sup>5</sup>Environment and Climate Change Canada, Victoria, Canada

<sup>6</sup>School of Law, University of Eastern Finland, Joensuu, Finland

<sup>7</sup>Centre for Climate Change, Environmental and Energy Law, University of Eastern Finland, Joensuu, Finland

<sup>8</sup>School of Law, University of Stirling, Stirling, UK

<sup>9</sup>School of Law, University of Warwick, Coventry, UK

Heatwaves are increasing in frequency, intensity, and duration, and represent the category of extreme event that is most easily attributable to anthropogenic warming. Yet how the spatiotemporal patterns of attribution outcomes link to population dynamics and demographic patterns is still poorly understood. Here we investigate whether children and young people are already being affected by a disproportionately greater number of attributable heat extremes, especially in the Global South. Using observations, reanalysis, and simulations of temperature changes available through the ISIMIP3b and CMIP6 projects, in combination with demographic data, we will investigate whether temperature extremes emerge more clearly and consistently from the noise across low-income countries in lower latitudes, which have some of the youngest populations. Our anticipated findings could have implications for children and young people seeking redress from climate harms, for example through climate lawsuits.