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Dr. Bronwyn Wake Editor-in Chief Nature Climate Change Mercator Research Institute on Global Commons and Climate Change (MCC) gemeinnützige GmbH

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Dear Dr. Wake,

we hereby wish to submit the manuscript entitled "Learning about urban mitigation solutions" by Lamb, Creutzig, Callaghan and Minx for publication as a Perspective in Nature Climate Change.

We argue that urban climate mitigation case studies are an underexploited resource. Many cases already exist, but their geographic coverage, topic content, use in comparative studies, and contribution towards knowledge accumulation in reviews is basically unknown. Case studies contain a wealth of information on the social, political and institutional conditions that shape or hinder urban mitigation efforts. Such qualitative information is the essential counterpart to an urban quantitative science, where innovation efforts are currently directed. Re-balancing this focus to exploit current and future case study knowledge is key to learning on solutions.

This perspective addresses these important gaps by compiling and analyzing 3,440 case study publications on urban climate mitigation. We use machine reading software to extract case study locations and uncover their topic content. We find strong regional and topic biases and observe only a handful of attempts so far to aggregate case study knowledge using systematic reviews. Suggesting ways forward, we explore the complementarity of quantitative typology methods with case study reviews – as a means to derive generalizable knowledge within peer groups of cities.

Urban mitigation research is happening in a time of big literature. We demonstrate that computer assisted methods can provide an overview of the field. This enables a quick, transparent and reproducible reflection on research biases, priorities, and opportunities for consolidation. We feel *Nature Climate Change* is the most appropriate journal to further stimulate these debates and to work towards a more synthetic global urban science on climate solutions.

We hope that you consider our manuscript worthy for publication.

Sincerely yours,

William F. Lands

Director Prof. Dr. Ottmar Edenhofer

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