



## **From Person to Planet: Powers of 10 scaling of climate action strategies from individual to global levels**

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Many climate action strategies at the international level have focused on “common but differentiated responsibilities” of nationally-driven efforts that are unique to each country. These efforts within nations emerge and evolve from a range of nested communities and social structures, including governance, in which individuals are embedded. However, while negotiations tend to focus on historical emissions and current socioeconomic status, one factor often missing is the size of the populations and sub-communities or cohorts involved down to the individual level. The size of population is crucial for forming agencies, which can initiate and implement diverse climate action strategies. To put population sizes in context and examine the opportunities for scaling climate action strategies, we present a “Powers of 10” (P10) framework that uses a 10-based logarithmic framework across 11 population cohorts between a single individual (100) and the projected  $\pm 10$  billion people (1010) by 2050. This paper will touch on research questions such as: How can each cohort segment be characterized? What scales are the most appropriate for deploying various climate action strategies and sustainable practices? Is there a regional “sweet spot” or a scale or range of scales where greenhouse gas reductions and social transformation away from fossil fuel-based energy can be maximized? What are some of the challenges and opportunities for engagement and rapid implementation of existing and emerging strategies?