

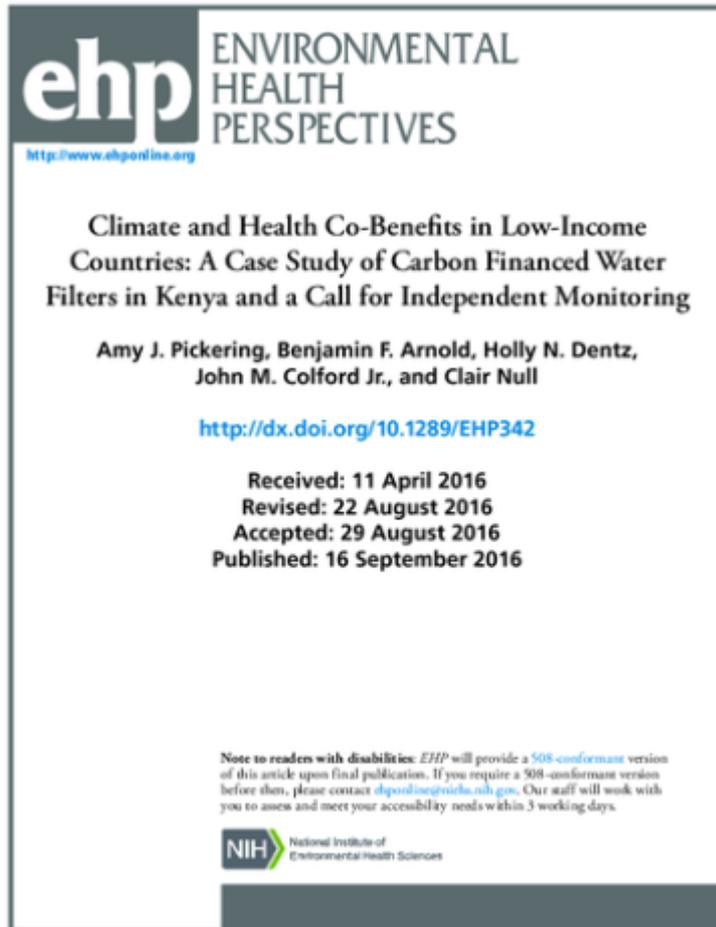
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# Climate and Health Co-Benefits in Low-Income Countries: A Case Study of Carbon Financed Water Filters in Kenya and a Call for Independent Monitoring

**Background:** The recent global climate agreement in Paris aims to mitigate greenhouse gas emissions while fostering sustainable development, and establishes an international trading

mechanism to meet this goal. Currently, carbon offset program implementers are allowed to collect their own monitoring data to determine the number of carbon credits to be awarded.

**Objectives:** We summarize reasons for mandating independent monitoring of greenhouse gas emission reduction projects. In support of our policy recommendations, we describe a case study of a program designed to earn carbon credits by distributing almost one million drinking water filters in rural Kenya to avert the use of fuel for boiling water. We compare results from an assessment conducted by our research team in the program area among households with pregnant women or caregivers in rural villages with low piped water access with the reported program monitoring data and discuss the implications.

**Discussion:** Our assessment in Kenya found lower household water filter usage levels than the internal program monitoring reported estimates used to determine carbon credits; we found 19% (N=4041) of households reported filter usage 2-3 years after filter distribution compared to the program stated usage rate of 81% (N=14988) 2.7 years after filter distribution. Although carbon financing could be a financially sustainable approach to scale up water treatment and improve health in low-income settings, these results suggest program effectiveness will remain uncertain in the absence of requiring monitoring data be collected by third-party organizations.

**Conclusion:** Independent monitoring should be a key requirement for carbon credit verification in future international carbon trading mechanisms to ensure programs achieve benefits in line with sustainable development goals.

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