

## Abstract

Transitioning to clean and fair energy systems is a challenging yet urgent task with the potential to address climate change, ensure energy access for all, support poverty alleviation, and improve gender equality. Implementing clean energy goes beyond technical factors, as it should be socially acceptable and address users' needs. Rural areas have largely been excluded from the discourse on energy transitions, despite their differing needs and resources. Gender is crucial to developing inclusive clean energy systems, but has only recently begun to inform research on energy transitions. The aim of this study is to add to the existing body of literature on rural energy transitions, provide insight into the energy culture of rural Armenia, and how it is linked to natural resources and gender.

In total, 380 respondents from thirty-one rural Armenian communities participated in both individual surveys and in small focus group discussions. The questions focused primarily on the material culture, the heating and cooking practices in peoples' daily lives, as well as their perceived impacts of heating fuels on their health and the environment.

The diverse group of respondents demonstrated a cohesive energy culture strongly shaped by the material culture around heating and cooking fuels, where fuel affordability and efficiency were key. Fuel conservation was a key practice, to the point where peoples' health is impacted by inadequately warm housing. Women spend much more time on heating and cooking tasks, yet perceive fewer health effects from fuels. Recent fuelwood harvesting restrictions and forest degradation is a major concern in the study communities, with some communities facing very limited heating options in the near future.

The study highlights the dire energy situation in rural Armenia, and underscores the need for gender-specific, inclusive programs to improve energy efficiency and implement alternative energy projects. Although the study was not able to demonstrate strong differences on energy cultures between genders, it shows key inequalities between men and women in rural Armenia. Further study on acceptability of potential energy efficient and clean energy interventions is necessary.