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Rationale for choice of fuel use by poor communities: a study of Ramaphosa Informal Settlement

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ABSTRACT

This study examines use of different energy sources by a poor community of the Ramaphosa Informal Settlement in Gauteng Province, South Africa. The purpose of this study was to investigate the reasons behind continued use of biomass fuel (plant or animal material, wood, charcoal) for cooking and space heating by poor residents. The research questions are: What informs the informal settlement residents' use of certain energy sources for cooking and heating over other types? Where residents possess knowledge of the harmful effects of continued use of an energy source, yet continue to use it, what are the reasons for this? Whose responsibility does it become to collect a chosen energy source, and how is it collected? The consequences of indoor air pollution vary from short-term – eye and throat irritation – to long-term effects – respiratory disease and cancer. Exposure to high levels of some pollutants, such as carbon monoxide, can even result in immediate death.

An exploratory empirical research was performed using mixed qualitative and quantitative methods using data on time-activity patterns collected from eleven households by means of semi-structured interviews, observations, focus group discussions and expert interviews. The results show that the respondents in the researched areas of *Reserve* and *Extension two* in Ramaphosa Informal Settlement use a total of thirteen different energy sources to meet their fuel needs. Although possessing the necessary knowledge on negative effects of indoor air pollution, the respondents lack sufficient resources to make decisions that would help improve their conditions regarding effects of air pollution. In thirty of the fifty respondents women and girls collect fuel and only in the remaining twenty wherein electricity, paraffin and liquid petroleum gas (LPG) are used, do men and boys become responsible for fuel collection. In the absence of electricity, respondents reported preferences for LPG, however, the prohibitive costs of the capital outlay of the latter energy source makes it unaffordable to more than half of the respondents.

The major finding in this report is that whilst some of the respondents think that electricity remains a key barrier to improving their socio-economic development and well-being, twenty of the fifty respondents who exclusively rely on government grants do not think so. Electricity, although an absolute necessity in the researched areas, is not a sufficient condition for avoidance of effects of indoor air pollution for the poor communities. This was demonstrated by the five respondents who have electricity but alternate its use with coal and firewood. The high cost of electricity means that poorer communities will continue to rely on the less expensive bio-mass fuel – risking their lives in the process – even when electricity is available. Respondents reported difficult conditions under which they live which are shaped by broader sets of unresolved structural aspects in the form of economics, social policies, and politics.