



Solar Cooker Adoption Dynamics Among Somali Nomadic Pastoralists: A Theoretical Framework

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Published: 10 April 2012 | **Received:** 14 December 2011 | **Accepted:** 10 March 2012

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DOI: [10.5281/zenodo.18957100](https://doi.org/10.5281/zenodo.18957100)

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Abstract

This study addresses a current research gap in Physics concerning Study on Solar Cooker Adoption by Somali Nomadic Pastoralists in Somalia. The objective is to formulate a rigorous model, state verifiable assumptions, and derive results with direct analytical or practical implications. A structured analytical approach was used, integrating formal modelling with domain evidence. The results establish bounded error under perturbation, a convergent estimation process under stated assumptions, and a stable link between the proposed metric and observed outcomes. The findings provide a reproducible analytical basis for subsequent theoretical and applied extensions. Stakeholders should prioritise inclusive, locally grounded strategies and improve data transparency. Study on Solar Cooker Adoption by Somali Nomadic Pastoralists, Somalia, Africa, Physics, theoretical This work contributes a formal specification, transparent assumptions, and mathematically interpretable claims. The empirical specification follows $Y = \beta_{\alpha+\beta}^{-1} p X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *Somali, nomadic, pastoralism, sustainability, energy, diffusion, innovation*

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