

Dedication

To our great prophet Mohammed (peace and prayers be upon
(him

To my parents and family

To soul of my brother Maki Ibrahim Boshara

To my friends

Fahmy Wahag

Acknowledgment

First, praise and thanks to Allah for giving me the ability and
.power to complete this work

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List of Abbreviations

United State Dollar \$

CCP Central Census of Population

FAO Food and Agricultural Organization of the United Nations

FNC Forests National Corporation

GATE Grouped Analyzed Their Economic

GHG Green House Gas

GJ Giga Joules

KJ Kilo Joules

Km Kilometers

KWh Kilo Watt hours

LPG Liquefied Petroleum Gas

MC Moisture Content

ME Ministry of Electricity

NGOs Non- Government Organizations

NMPL_E National Management Plan for Eritrea

RWEDP Renewable Wood Energy Development project

SDG Sudanese Geneih

SKEDP-NKRDP South kordofan Range Management Strategy Study and Khor
Abu Habil Basin Planning and Water Development Study

UNDP United Nation Development Programme

UNESCO United Nations Educational Scientific and Cultural Organization

WHO World Health Organization

Abstract

Biomass fuel Alternatives Energy Consumption at Household Level in
Eldilling Locality- South Kordofan State

This study has been carried out in Eldilling locality in south kordofan State. The objective of the study was to investigate the extent of family household will to adopt the alternative fuel (LPG) instead of fuelwood.

To the households consumption. In addition to that, the study aims to know the other fuel types used in the study area by the households and .the constraints limited thin adoption in the study area

Two kinds of data were collected: primary data and secondary data; primary data were collected using questionnaire that has been designed to cover the entire study objective. The secondary data collected from .magazines, reports, researches and internet

It has been observed during the field visits that the studied community was homogenous, the household has been selected to represent the study unit, 60 households were been chosen randomly from the study even to answer the questionnaire. Then after that, data has been coded and .analyzed using SPSS program

The results showed that the fuel types used in the study area were firewood 98%, charcoal 97%, agricultural residues 22% and LPG was 18%. The household will to adopt LPG was 92%. The high prices for the empty LPG containers and the shortage of LPG distribution services .points in the study area are the constraints which limit their adoption

The study result summary showed high will from households to adopt the LPG instead of the fuelwood, and this will decrease pressure upon .trees cover and conserve environment

The study recommended the necessary of introduce of project that working in provide of alternative energy such as LPG and provision of LPG distribution point and training of the household their proper use and reduction of the consumption prices to encourage the community for the .use of LPG

الخلاصة

بدائل طاقة الوقود الحيوي و إستخدامها على مستوى الأسر بمحلية
الدنج- ولاية جنوب كردفان

أجريت هذه الدراسة في محلية الدنج بولاية جنوب كردفان, حيث هدفت إلى معرفة مدى رغبة الأسر في تبني الطاقة البديلة (غاز البترول السائل) بدلا عن طاقة الوقود الحيوي (حطب الحريق- الفحم النباتي) في الإستخدام المنزلى. بالإضافة إلى معرفة نماذج الطاقة الأخرى المستخدمة عند الأسر بمنطقة الدراسة و معرفة المعوقات التي تحد من تبني هذا البديل.

تم جمع نوعين من البيانات: بيانات اولية وبيانات ثانوية البيانات الثانوية من خلال الدوريات والمجلات والتقارير والبحوث ذات الصلة و الانترنت. البيانات الاولية تم جمعها عن طريق الاستبيان الذى صمم بطريقة يغطى كل اهداف الدراسة, لوحظ من خلال الزياره الميدانية ان مجتمع الدراسة متجانس, تم اختيار الاسرة لتمثل وحده الدراسة, وتم اختيار 60 اسره عشوائيا من منطقته الدراسه للاجابه علي الاسئلة. كما تم ترميز البيانات ومن ثم تحليلها عن طريق البرنامج الاحصائي ال SPSS .

اوضحت النتائج ان نماذج الطاقه المستخدمة عند الاسر بمنطقه الدراسه, حطب الحريق بنسبة 98% والفحم النباتى بنسبه 97% بينما بلغت نسبة المستخدمين للمخلفات الزراعيه 22% وكانت نسبة استخدام غاز البترول السائل 18%. ان الذين يرغبون فى تبني الغاز كبديل لحطب الوقود(حطب حريق - فحم نباتى) في منطقة الدراسة بلغ نسبة 92%. ارتفاع تكلفة الشراء للاسطوانة الفارغه وعدم توفر مراكز لخدمات الغاز بالمنطقة من المعوقات التي تحد من تبني هذا البديل.

خلصت الدراسة الي ان هنالك رغبة عالية من المواطنين لتبني هذا البديل (غاز البترول السائل) بدلا عن حطب الوقود حطب حريق -الفحم النباتي) وهذا يقلل الضغط علي الغطاء الشجري وبالتالي المحافظة علي البيئة.

اوصت الدراسة بضرورة ادخال المشروعات التي تعمل في مجال توفيرالطاقات البديلة مثل غاز البترول السائل وتوفير مراكز لخدمات الغاز بالمنطقة مع التدريب علي طرق الاستخدام المثلي وخفض تكلفة الاستهلاك لتشجيع المواطنين علي تبني هذا البديل .