

SECOND 100 SOLAR COOKERS PROJECT FOR KHOST

THE SECOND 100 SOLAR COOKER PROJECT EFFICIENCY ANALYSIS SURVEY

FINAL SUMMARY REPORT

(SAMPLE SIZE N=80)

NOVEMBER 2023

DATA COLLECTED BY: ENG JABARULLAH AND ENG SAIDKARIM

REPORT PREPARED BY : MIRWAIS TANAI

Introduction

The aim of this survey is to analyse the current condition and efficiency of the “**SECOND SOLAR COOKERS FOR KHOST PROVINCE**” funded by Afghanic Organization and EG solar, implemented by the local partner, Khost Old Men Association (KOMA) in Khost Province.

80 beneficiaries in 12 various villages of Khost Province were visited and questioned to analyse the efficiency and current conditions of the solar cookers from the second solar cookers project. The report and findings are based upon the data collected from 80 beneficiaries through a questionnaire.

Data Collection

The survey posed 13 questions:

Questions to be answered by beneficiaries

- 1- How long do you use the cooker a day?
- 2- How long for water boiling?
- 3- How long for dishes cooking?
- 4- What were you using for cooking before the solar cooker?
- 5- Were your children collecting plastics and other things for cooking before the solar cooker?
- 6- How much wood or gas were you using before the solar cooker?
- 7- How much wood or gas you use now?
- 8- How many times do you cook or boil water?
- 9- Will you recommend using the Solar Cooker to your neighbors/relatives?

Questions to be answered by surveyor

- 10- Do they know how to use the solar cookers properly?
- 11- Is the cooker in good condition?
- 12- Do they have the user manual?
- 13- Can they use the user manual to use the cooker?

The data was collected from 80 beneficiaries of the Solar Cookers. In order to visit the Solar Cooker sites and collect the required data, the beneficiaries were selected upon convenience sampling method, i.e., the beneficiaries were reached out by phone and an appointment was made

with six to eight beneficiaries who agreed with the visit a day before visiting them in person.

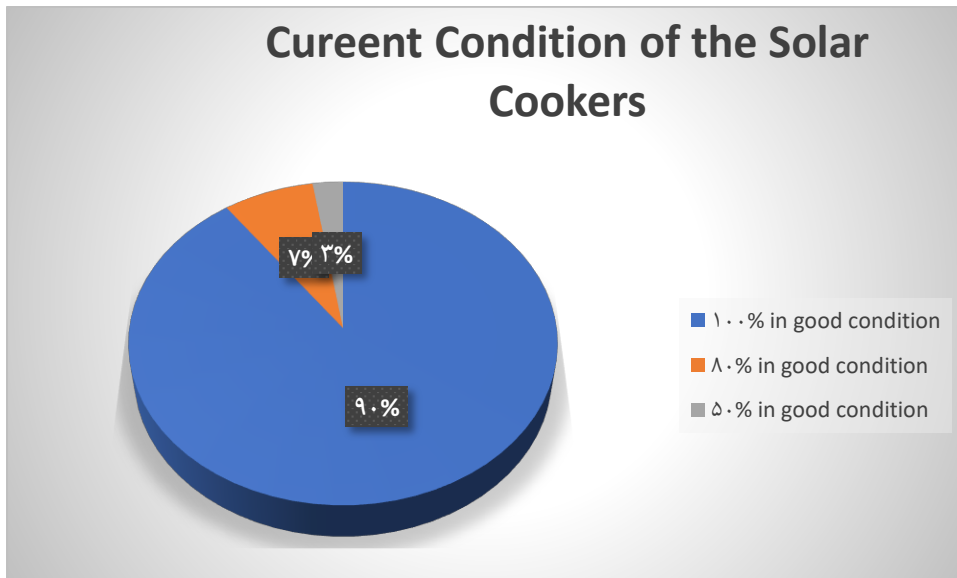
During the survey, number of families visited in different villages

- 1- Mandozi 6 families.
- 2- Latak 5 families.
- 3- Upper Karwansrai 8 Families.
- 4- Dairy village 8 Families.
- 5- Ponzaya, 6 Families.
- 6- Kundi, 6 families.
- 7- Center 8 families.
- 8- Parm Bagh, 6 families.
- 9- Zhai village, 6 families.
- 10- Pirbadshah village 6 families.
- 11- Mitkhil village 8
- 12- ShaKhamir 7

Findings

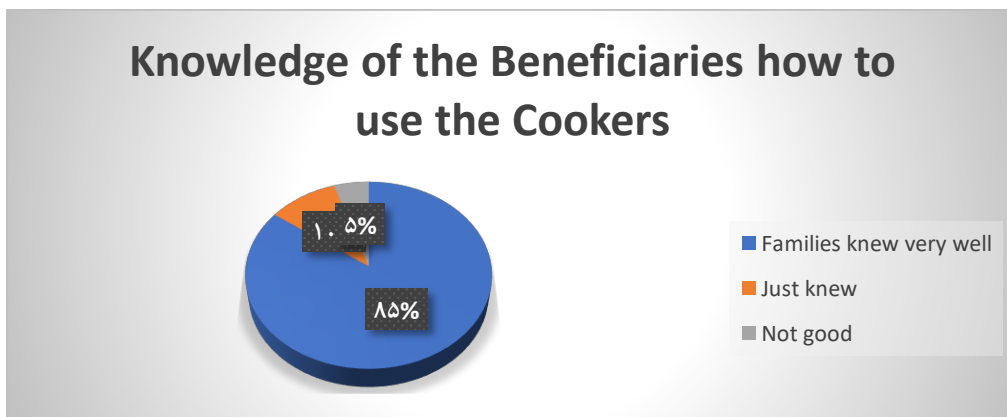
Current Condition of the Solar Cookers

70 solar cookers from the 80 visited solar cooker were 100% in good condition. 8 solar cookers from the 80 visited solar cookers were 80% in good condition, most of them were fallen down. 2 of them were left to hail.



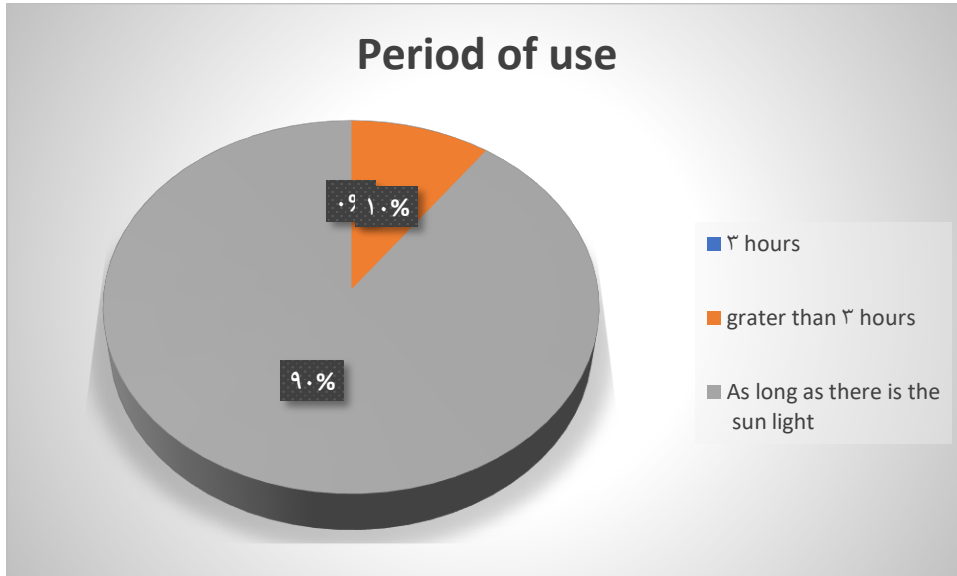
Knowledge of the Beneficiaries how to use the Cookers

68 families of the beneficiaries knew very well how to use the solar cookers, 8 families new but not very well, some of them didn't know how to adjust the Shadow of the indicator, and some of them didn't now how to set the cooker after use. 4 families were not present on the day of distribution and they didn't have literate person at home to read the user manual for them. 70 families had user manuals. Only 4 families were not able to read the user manual, because there was no literate person.



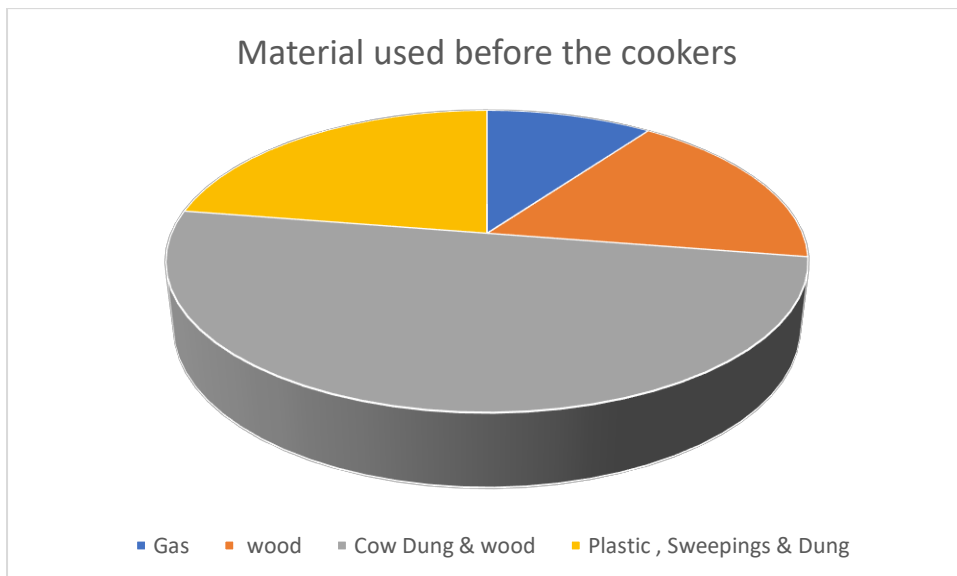
Period of Use

The number of families who were using the cooker as long as there was the sun light was 72. The number of families who were using the cooker more than 3 hours but not all the day was 8. There was no one who was using the cooker only for three hours. Almost 70% for cooking and 30% for boiling or warming the water.



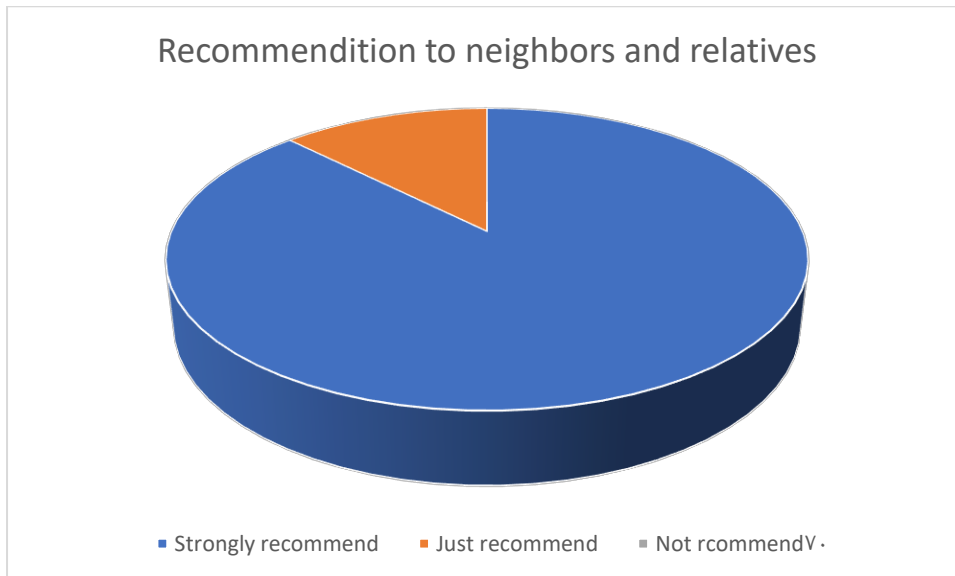
The materials they were using Before the solar cookers

Before the solar cookers 8 families were using gas. 40 families were using cow dung and wood. 14 families were using wood, and 18 families were using material collected from the streets. In 12 families school age children were collecting the plastic and sweepings.



The amount of gas and wood used before the cookers and after.

70 Families from 80 were strongly recommending the solar cookers to their neighbors and relatives, 10 families were just recommending, there was no one who don't want to recommend the solar cooker to his neighbors and relatives.



Problems and Limitations

There were no big problems, but in some cookers the indicator's plates were bigger and couldn't be turned down properly. Almost all cookers were maintained properly and only 3% of them had problems. Some cookers were sold to other families and we were not able to find and check them, few of the beneficiaries were not cooperative and did not agree to visiting the Solar Cookers distributed to them. They stated that they were not at home and busy at works. Some families because of illiteracy were not able to read the user manuals and were not present on the information giving day.

Conclusion

Based on the survey from the 80% of the beneficiaries, the Second Project, 100-Solar Cooker's has been successfully implemented and has resulted in an average monthly saving of 1050- AFN for an average family who were using gas, and the solar cooker's use was maximum. All the beneficiaries have been fully familiarized and satisfied with the use and maintenance of the Solar Cookers. And they are willing to recommend the Solar Cookers to their neighbors and relatives, which may be considered as a positive point for the assessment of future demand. Furthermore, some neighbors and relatives of the current beneficiaries have expressed their wish for having such Solar Cookers which may imply that there could be an increased demand for the Solar Cookers if properly introduced.

Index

Index-1 Pictures from the site.



Figure 1: Mirwais Tanai is explaining how to use the solar cooker



Figure 2: Beneficiaries signing the document



Figure 3: Beneficiaries carrying the solar cookers



Figure 4: Beneficiaries with solar cooker, pressure cooker and a user manual



Figure 5: Eng Saidkarim & Jabarullah are checking the solar cooker in Karwansrai



Figure 6: Eng Saidkarim & Jabarullah are checking the solar cooker in Shakhmir



Figure 7: : Eng Saidkarim & Jabarullah are checking the solar cooker in ZhiVillage



Figure 8: Eng Saidkarim & Jabarullah are checking the solar cooker in Deri village



Figure 9: Eng Saidkarim & Jabarullah are checking the solar cooker in Center or Matoon



Figure 10: : Eng Saidkarim & Jabarullah are checking the solar cooker in Mandozi



Figure 11: Latak Village



Figure 12: Farm Bagh



Figure 13: Kundi village

Index-2 The Interview Sheet used for collecting information

Interview Sheet

Questions to be answered by beneficiaries

- 1- How long do you use the cooker a day?
 1- hours. 2- hours. As long as there is the sun light
- 2- How long for water boiling in percent*30%*.....?
- 3- How long for dishes cooking*70%*.....?
- 4- What were you using for cooking before the solar cooker?
a- Wood, b- Gas, c- cow dung, ~~d- collected plastic~~ and other things
- 5- did your children collect plastics and other things for cooking before the solar cooker? ~~a- yes~~ b- no
- 6- How much wood or gas were you using before the solar cooker in Kgs per month*35 kg*.....?
- 7- How much wood or gas you use now in Kgs per month *10 kg*..?
- 8- How many times do you cook or boil water a day *11 days*.....?
- 9- Will you recommend using the Solar Cooker to your neighbors/relatives?
 Strongly recommend, just recommend, Not recommend

Questions to be answered by surveyor

- 10- Do they know how to use the solar cookers properly?
 Very well, Well, Not good
- 11- Is the cooker in good condition?
 100%, 80%, 50%
- 12- Do they have the user manual?
 Yes, No,
- 13- Can they use the user manual to use the cooker?
 Yes, No

Jabbarullah
Baad
Hijj

Saiel Karim


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EFFICIENCY ANALYSIS SURVEY**

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Approved By: Eng. Jabarullah

Handwritten signature of Eng. Jabarullah in blue ink, featuring a stylized 'J' and 'B'.

Eng. Saidkarim

Handwritten signature of Eng. Saidkarim in blue ink, consisting of a large, sweeping 'S'.

Eng. Mirwais

Handwritten signature of Eng. Mirwais in blue ink, featuring a large, circular loop.

Date: 22.Nov.2022