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Resource Efficiency and Waste Management for Off-grid Solar Products in Kenya
(REWMOS)

REWMOS Awareness Creation Report on Best Practices To Enhance Efficiency, Extend the lifespan and Improve Waste Management of Off Grid SHS.

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INTRODUCTION

A critical component in any waste management program is public awareness and participation, in addition to appropriate legislation, strong technical support, and adequate funding. Solar waste is described as discarded solar electronic devices or appliances that have ceased to be of any value to their owners.

Everyone needs to have a proper understanding of waste management issues, without which the success of even the best conceived waste management plan becomes not viable.

Resource Efficiency and Waste Management for Off-grid Solar Products in Kenya (REWMOS) is a project that aims to tackle the issues related to electronic waste from off-grid solar products in Kenya. The project is implemented by Solibrium, a social enterprise located in Kakamega, Western Kenya in partnership with Myclimate and REPIC.

The project also aims to reduce the negative environmental impacts of SHS at the end of their lifespan and increase the value associated with owning a SHS for the end-user. All this can be achievable by creating awareness and sensitization.

The objectives of the awareness was to:

- Educate solar users on best practices to enhance efficiency, extend lifespan and improve waste management of off grid solar home systems.
- Provide awareness to stakeholders (solar users, technicians, and prospect solar users) on what REWMOS intends to do.
- Seek responses and opinion of the stakeholders about best practices on disposal of obsolete solar products.
- Seek feedback and experiences from solar users regarding use of solar, and practices that that can increase longevity, efficiency and effectiveness of solar components.
- Get feedback and opinions on sale of solar using lease model.
- To identify which best practices users are already employing in their homes.
- To identify which additional best practices will users welcome and are interested in.
- Teach users about best practises, environmental impact of SHS waste, and economic and environmental benefits of life-span extension of SHS.

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1.MATIHA AWARENESS CREATION REPORT.

Date:8th March 2019

***A group photo of all solar users and prospects who attended the 1st REWMOS* Awareness creation.**

The Awareness was attended by 67 solar users, 7 prospect solar users, and 1 technician. The awareness proceeding was led by REWMOS Project Coordinator, Hardley Malema in Liaison with John Luseno and Douglas Manyonyi.

Demonstration of solar product parts

Different types of Solar Home Systems and their components were displayed and Solibriums' technical person explained to them what role each item plays. The components included; batteries, Panels, Bulbs, Cables/wires and a Television set.

Best practices to enhance Efficiency, Extend the life span of Solar Home Systems.

All the participants were asked if they were aware of any good practices rather how they were maintaining their kits at the moment. None of them had an idea on how to maintain their components.

Solibrium technician explained the lifespan of each solar component (Battery – 5 years, Panels – 25 years and bulbs – 30,000 working hours). The technician pointed out that some of the technicians replace wrong spares to solar kits making them not usable, or reducing their life span and therefore they should only contact qualified technicians.

Most of the solar users had no idea on the lifespan of the components and they had not read manual that come with the SHS upon purchase because most of them do not understand English as well the words were too tiny.

Through the REWMOS project, All the participants were issued illustrated graphic brochures both in English and Kiswahili that described the best practices that were being explained by the technician. The solar users were excited by the cartoons on the brochures that clearly explained what should be done.

Expert Advice on best practices

Use

- Regularly clean solar panels and other components.For the solar panel,water with no detergent should be used with no detergent for effective charging.
- Install panels in well protected areas away from children and their preferred play areas.
- Always be careful when handling the components to avoid breaking as a result of their delicate nature.
- Always plug in recommended components to right usb or charging ports to avoid short circuiting of the components.
- Install solar panels at an angle that allows maximum exposure of sunlight especially at peak hours of sunlight around mid-day.
- Storage of the battery in a safe place away from children interference and fire sources.
- Contact qualified technicians for proper diagnosis,advice and repair of faulty components.
- Always ensure the battery is fully charged.
- Do not power faulty or multiple components.
- Always read the user manual and use the components designed for the system.

Disposal

For end users

- Take obsolete solar components to designated collection points for proper recycling/disposal,or consult relevant authorities e.g NEMA or your seller for advice.
- Call REWMOS on 0797173003 for advice.
- Do not dispose the batteries on open land or latrines
- Call and return the products to the suppliers at the end of life
- Read and keep all the documents issued at the date of purchase for advice on disposal practices

Negative Impacts of E waste.

- Dumping electronics in a landfill creates a big problem for the environment since for example the batteries contain lithium ion that is toxic. The different toxic substances can also pollute water making it unsafe for drinking. Improper dumping of electronic waste affects the environment as a whole ad this includes all types of creatures. When the chemicals are released to the atmosphere, every living this is negatively impacted. This also includes the air and the soil, practically; anything that comes into contact with electronic waste is at risk.
- Materials in electronics cause health hazards which include respirator problems,thyroid problems, reproductive disorders, fetal damage among others.

Feedback summary from the participants on collection of obsolete components

- Some solar users would want to be REWMOS agents where they collect obsolete solar components and deliver to REWMOS.
- More T shirts to be given to solar users to market REWMOS.
- Solar products can be given on a lease model for effective take back.
- Solar users to return the solar products to their sellers once they get to their end of life.
- The participants to tell more solar users about the project.
- REWMOS to open up collection points in the villages where the components can be dropped.
- Solibrium to come up with a lease model where solar components can be taken back easily after their end of life

Feedback summary from the participants

A total of 5 prospects were interested in trying out the lease model that would be rolled out in the next phase. All their details were recorded. Also a questionnaire was given to participants for feedback on the awareness. A total of 45 participants were interviewed.

In general, Most of the solar kits possessed by the solar users were between 1 month to 1 year.None of the solar components had malfunctioned since purchase. Regarding E waste, most of the respondents

acknowledged that after the awareness, they now had an excellent level of understanding of not only E waste/Solar waste. Also, they acknowledged that they had learnt about REWMOS, how to maintain their components and proper disposal. A good number reported that they would contact REWMOS return to company for proper disposal, they also requested for compensation or a replacement at a reduced cost whenever they return the components.

Questions asked by participants about the REWMOS project

Below are some of the questions that the participants raised and sought answers to:

1. Will Solibrium accept components from other Companies e.g. Mobisol and Mkopa for recycling/repair/disposal.
2. Are all the solar components recyclable?
3. Can solar products be electrocuted by lightning?
4. Is it possible for minor repair issues such as wires eaten by rats be done by local technicians?
5. Some solar users are female and climbing up the households for cleaning of components can be an issue. What is the advice?
6. Can repairs be done for free after the warranty?
7. How much could the lease model be for the components?
8. Is there any other way of servicing solar panels besides cleaning it?
9. What would be the benefit to the solar users once they have brought back the components since some will have used their transport?
10. When disposing obsolete solar components, will the owner a get new components?
11. Is there any compensation to clients when you return products that have failed to function?
12. When will REWMOS collection begin?

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PICTORIAL


Figure 2&3: Project explanation and solar components by Hardley Malema.



Figures above shows explanation of the best practices and interactive sessions.

Appendices

Appendix 1: Training Attendance register

REPIC With support from: SOLIBRIUM-SOLAR Nuru Maishani myclimate Protect our planet

ATTENDANCE FORM

Activity: Awareness creation Venue: Matha Date: 8/3/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	Helen Otsieli	0718087598	9733507	Mushiachi	Helen
2	Aasha Humphrey	0757083614	37136892	Mushiachi	
3	Doricus Maliaba	0701987131	33600544	Mushiachi	
4	Bonventry Barasa	0701976366	35867433	Mushiachi	
5	Pamela Bwonya	0704145878	34770221	Vihiande	Pamela
6	PETRONILLA I. LAKOLO	0721729317	3879973	Wesshombe	
7	MASLIDA ONAMI			Makhumbi	
8	EUNICE NYANGWESO	0793637705	25724618	Makhumbi	
9	Ann Ai Mukuba	0701848585	29402865	Mushachi	
10	Dismas J wekulo	0702821285	1977295	Mayuge	
11	LEAH MBAYACHI	0715114418	22339197	MWITUMBU	
12	JACKLYNE MUSUMBI NDOMBI	0712221186	30483299	LUKUME	

Activity organised by: Hadley Makena SIGNATURE: DATE: 8/3/2019

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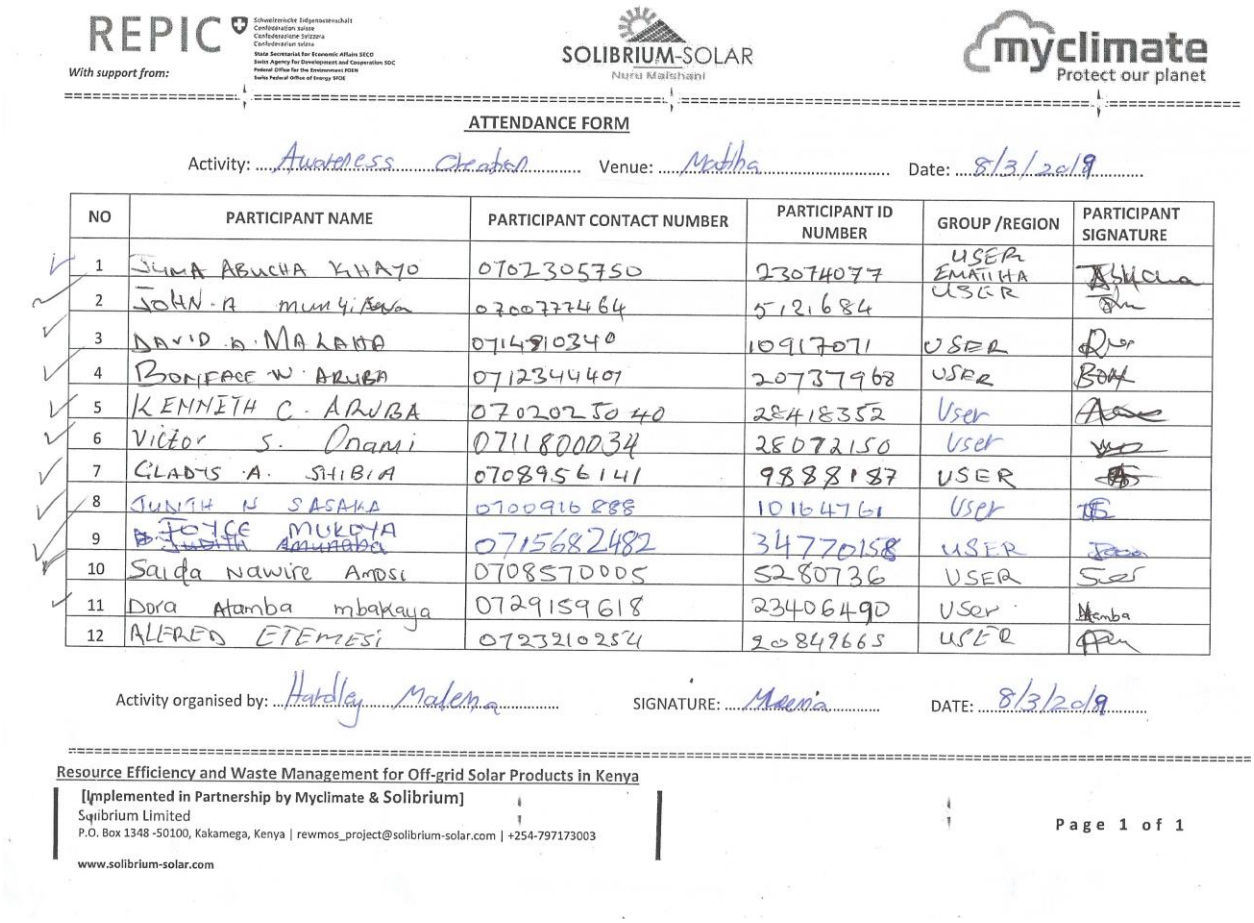
Nuru Maishani
myclimate
Protect our planet

ATTENDANCE FORM

Activity: Awareness creation Venue: Matha Date: 8/3/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	Caroline Mukoya	0710550131	25901731	User. Mushiachi	
2	Emely Muwanzasi Shikuku	0701294281	14728100	Prospect.	
3	Carolyn Klarenzeli	0718564333	29872432	User	
4	Mary Mangeba	0714414038	12701657	Prospect	
5	TRUPHENA NAMUKURU	0742106425	20803496	User	
6	DOREEN ONAMI	N/A	N/A	Prospect	
7	MARTHA SECHE.	0719458226	6567539	User	
8	Alasi Kati	0713315781	25455588	Prospect	
9	NAMA Kabala	0723677526	13283385	User Bushili	
10	Beatrice Emwangala	0723372351	9798423	User	
11	ROSE WATULA	0700474373	25605158	User vilanda	
12	JANEPHEPHER AJUKWE	0711541277	20291836	User BUSHILI	

Activity organised by: Hartley Malera SIGNATURE: Malera DATE: 8/3/2019



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ATTENDANCE FORM

Activity: Awareness Creation Venue: Matiha Date: 8/3/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	SUMA ABUCHA KHATO	0702305750	23074077	USER EMATIHA	
2	JOHN A MUNYI ARWA	0700777464	5121684	USER	
3	DAVID A MALAMA	0714810340	10917071	USER	
4	BONIFACE W ARUBA	0712344401	20737968	USER	
5	KENNETH C ARUBA	0702027040	28418352	User	
6	Victor S. Onami	0711800034	28072150	User	
7	GLADYS A SHIBIA	0708956141	9888187	USER	
8	JUNITH N SASAKA	0700916888	10164761	User	
9	~~Judith Amunaba~~ FOYCE MUKOYA	0715682482	34770158	USER	
10	Saida Nawire Amosi	0708570005	5280736	USER	
11	Dora Atamba mbakaya	0729159618	23406490	User	
12	ALFRED ETEMESI	0723210254	20849665	USER	

Activity organised by: Hardley Malena SIGNATURE: DATE: 8/3/2019

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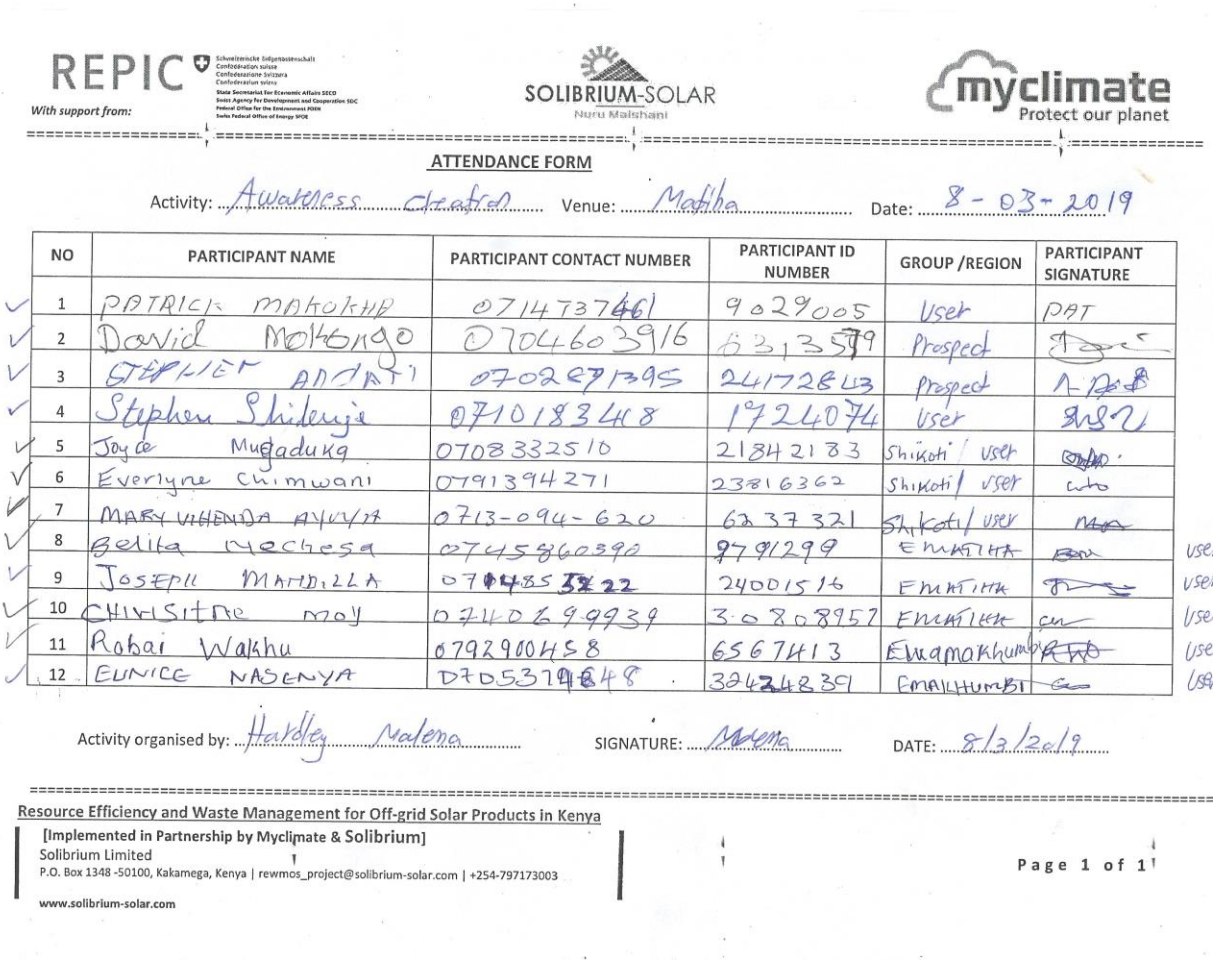

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ATTENDANCE FORM

Activity: Awareness theatre Venue: Matiha Date: 8-03-2019

	NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE	
✓	1	PATRICK MAKOKHA	0714737461	9029005	User	PAT	
✓	2	David Mokhonjo	0704603916	23,3599	Prospect		
✓	3	STELLER ANDATI	0702971395	24172843	Prospect		
✓	4	Stephen Shilenje	0710183468	1724074	User		
✓	5	Joyce Mugaduka	0708332510	21842183	Shikoti / user		
✓	6	Everlyne Chimwani	0791394271	23816362	Shikoti / user		
✓	7	MARY VIHENDA AYUYA	0713-094-620	62 37 321	Shikoti / user		
✓	8	Belila Mechesa	0745860390	27791299	EMAKITHA		use
✓	9	JOSEPH MAHDZLA	0704485322	24001516	EMAKITHA		use
✓	10	CHIVISITHE MOY	0714069939	30808957	EMAKITHA		use
✓	11	Robai Wakhu	0792900458	6567413	Emamakhumbi		use
✓	12	EUNICE NASENYA	0705379848	32434839	EMAKHUMBI		use

Activity organised by: Hardley Malena SIGNATURE: Malena DATE: 8/3/2019

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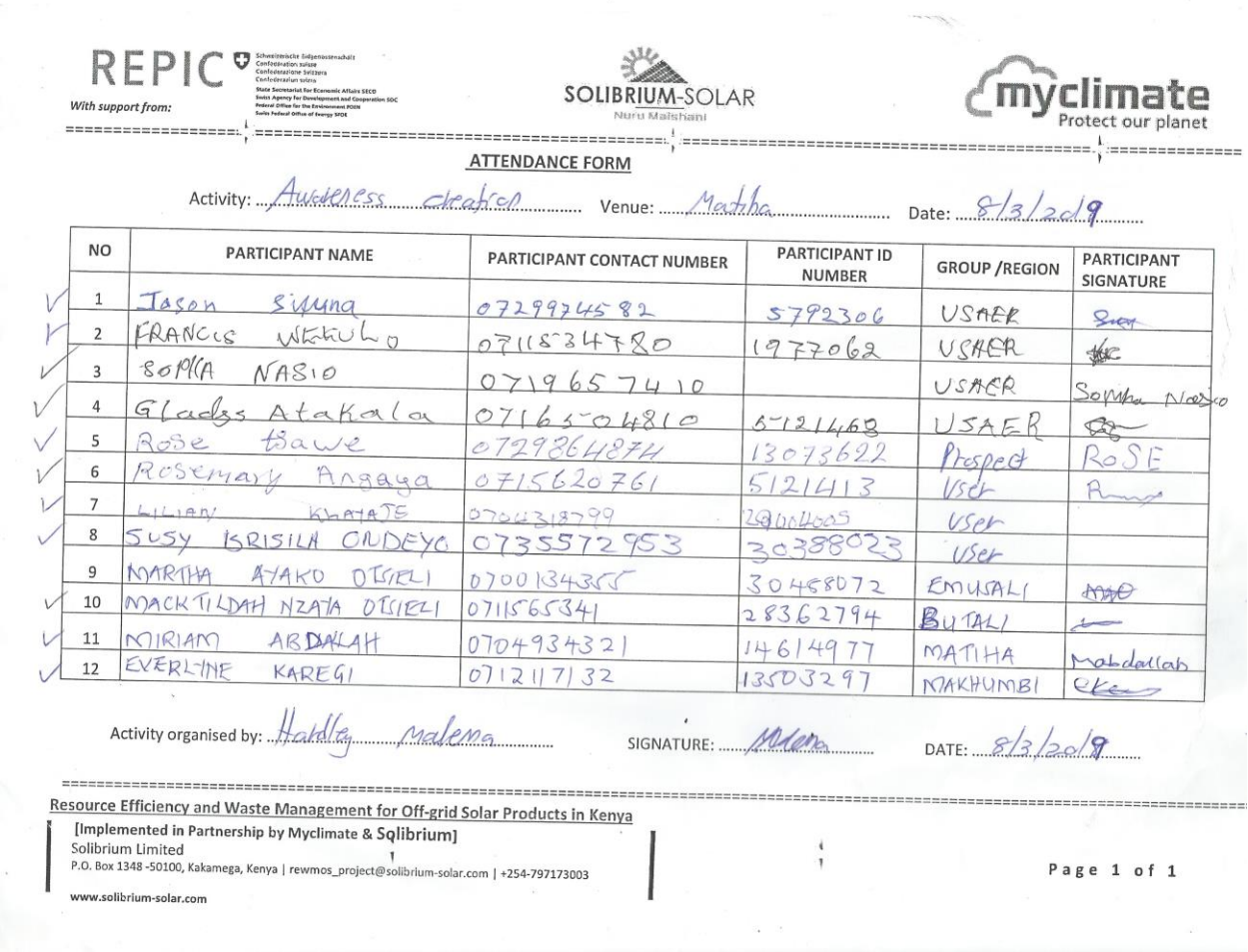

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ATTENDANCE FORM

Activity: Awareness creation Venue: Matiha Date: 8/3/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	Jason Sikuna	0729974582	5792306	USAER	
2	FRANCIS WEKULO	0715534780	1977062	USAER	
3	SOPHIA NASIO	0719657410		USAER	Sophia Nasio
4	Gladys Atakala	0716504810	5121468	USAER	
5	Rose Bawe	0729864874	13073622	Prospect	ROSE
6	Rosemary Angaya	0715620761	5121413	User	
7	LILIAN KHAYATE	0704318799	29004005	User	
8	SUSY ISRISILA ONDEYO	0735572953	30388023	User	
9	MARTHA AYAKO OTSIELI	0700134355	30468072	EMUSALI	
10	MACKTILDAH NZAYA OTSIELI	0711565341	28362794	BUTALI	
11	MIRIAM ABDALLAH	0704934321	14614977	MATIHA	Mabdallah
12	EVERLYNE KAREGI	0712117132	13503297	MAKHUMBI	

Activity organised by: Hadidy Malena SIGNATURE: DATE: 8/3/2019

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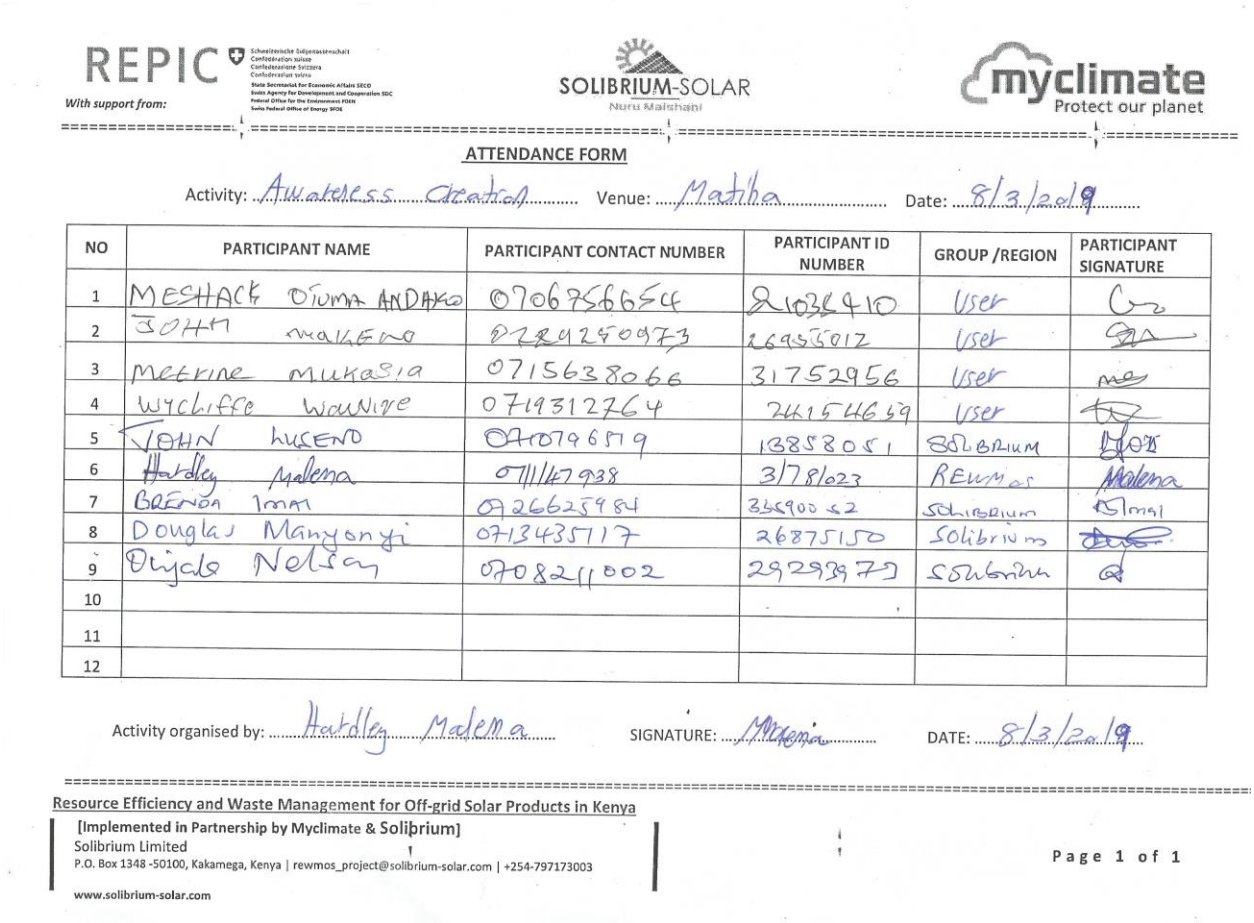

ATTENDANCE FORM

Activity: Awareness creation Venue: Matiha Date: 8/3/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	MESHACK OTUMA ANDAYO	0706756664	21038410	User	
2	JOHN MALENO	0728450973	26955017	User	
3	MERRINE MUKASIA	0715638066	31752956	User	
4	WYCLIFFE WANJIRU	0719312764	24154659	User	
5	JOHN HUSENO	0707965819	13858051	SOLIBRIUM	
6	Hartley Malena	0711147938	31781023	REWMOS	Malena
7	BRENDA IMAI	0726625984	35690052	SOLIBRIUM	Imai
8	Douglas Manyonyi	0713435717	26875150	Solibrium	
9	Dijcle Nelson	0708241002	29293973	Solibrium	
10					
11					
12					

Activity organised by: Hartley Malena SIGNATURE: Malena DATE: 8/3/2019

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2. EMASERA AWARENESS CREATION REPORT.

Date: 13th March 2019.

A group photo of all solar users and prospects who attended the 2nd REWMOS Awareness creation.

The Awareness was attended by 22 solar users, 5 prospect solar users, and 1 technician. The awareness proceeding was led by REWMOS Project Coordinator, Hardley Malema in Liaison with John Luseno and Douglas Manyonyi.

Demonstration of solar product parts

Different types of Solar Home Systems and their components were displayed and Solibrium's' technical person explained to them what role each item plays. The components included; batteries, Panels, Bulbs, Cables/wires and a Television set.

The technician also explained the lifespan of each components as follows :(Batteries-5 years, Panels -25 years and bulbs – 30,000 working hours).

Best practices to enhance Efficiency, Extend the life span of Solar Home Systems.

All the solar users admitted they do not read manuals that come with the SHS kits. No one had an idea on how to maintain their solar kits.
All participants reported that they were only concerned with daily payments for the kit.
All the SHS users were given graphic best practices bronchure written in both English and Kiswahili.The technician then went through with each of the best practice as well as illustrating so as to ensure the users have a better understanding on the need to maintain and how to maintain their kits in order to extend the kits lifespan. The solar users were excited by the cartoons on the brochures that clearly explained what should be done.

Expert Advice on best practices

Use

- Regularly clean solar panels and other components.For the solar panel,water with no detergent should be used with no detergent for effective charging.
- Install panels in well protected areas away from children and their preferred play areas.
- Always be careful when handling the components to avoid breaking as a result of their delicate nature.
- Always plug in recommended components to right usb or charging ports to avoid short circuiting of the components.
- Install solar panels at an angle that allows maximum exposure of sunlight especially at peak hours of sunlight around mid-day.
- Storage of the battery in a safe place away from children interference and fire sources.
- Contact qualified technicians for proper diagnosis,advice and repair of faulty components.
- Always ensure the battery is fully charged.
- Do not power faulty or multiple components.
- Always read the user manual and use the components designed for the system.
- For flooded batteries, periodically top up battery acid.

Disposal

For end users

- Take obsolete solar components to designated collection points for proper recycling/disposal,or consult relevant authorities e.g NEMA or your seller for advice.
- Call REWMOS on 0797173003 for advice.
- Do not dispose the batteries on open land or latrines
- Do not burn the obsolete solar components.
- Call and return the products to the suppliers at the end of life.
- Read and keep all the documents issued at the date of purchase for advice on disposal practices.

Negative Impacts of E waste.

- Impact on the environment: immediate and direct impact of inappropriate recycling or disposal of end of life products will mean local contamination for example through harzadous materials used in batteries.
- Dumping electronics in a landfill creates a big problem for the environment since for example the batteries contain lithium ion that is toxic. The different toxic substances can also pollute water making it unsafe for drinking. Improper dumping of electronic waste affects the environment as a whole ad this includes all types of creatures. When the chemicals are released to the atmosphere, every living this is negatively impacted. This also includes the air and the soil, practically; anything that comes into contact with electronic waste is at risk.
- E waste contains materials that are toxic such as lead, mercury which are harmful to the environment and human health if improperly managed. The impacts on health can bring damage or implications to reproduction, liver, kidneys, blood, respiratory, heart and lungs.

Feedback summary from the participants on collection of obsolete components

- REWMOS to set up collection points in the villages.
- Some solar users would want to be REWMOS agents where they collect obsolete solar components and deliver to REWMOS at a fee.
- Incentives to be given to solar users who return the components.
- Village elders to help in marketing of REWMOS in the barazas.
- More T shirts to be given to solar users to market REWMOS.

Feedback summary from the participants

A total of 5 prospects were interested in trying out the lease model that would be rolled out in the next phase. All their details were recorded. Also a questionnaire was given to participants for feedback on the awareness. A total of 21 participants were interviewed.

In general, Most of the solar kits possessed by the solar users were between 3 month to 18 months year. None of the solar components had malfunctioned since purchase. Regarding E waste, most of the respondents acknowledged that after the awareness, they now had an excellent level of understanding of not only E waste/Solar waste. Also, they acknowledged that they had learnt about REWMOS, how to maintain their components and proper disposal. They would also recommend our E waste solutions to other solar users not sold by Solibrium.

Questions asked by participants about the REWMOS project

Below are some of the questions that the participants raised and sought answers to:

1. Will Solibrium accept components from other Companies e.g. Sunking and Mkopa for recycling/repair/disposal?
2. What happens to batteries that cannot be recycled at all?
3. Can wires be brought as E waste too?
4. Is it a must for technicians to be paid after warranty of the components expire?
5. Can the lifespan of components such as battery be extended like the panels?
6. How much could the lease model be for the components?

PICTORIAL




Figures above show interactive discussions during the awareness creation.

Appendix 2: Training Attendance register

REPIC With support from: SOLIBRIUM-SOLAR Nuru Maishani myclimate shape our future

ATTENDANCE FORM

Activity: Awareness creation Venue: Emasera Date: 13/3/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	Celementa mkojia amanani	0790984921	n/a	Solar user	
2	WINNY MERIMA	0714598468	34831502	Solar user	
3	EVelyn Diviechi	n/a	n/a	Solar user	
4	RABBACA ISHANOCHI	0792199021	n/a	Solar user	
5	SCHOLASTIC SHIVONZO	0728897124	11840107	prospect	
6	Lydia ADALA	0759978916	20890798	prospect	
7	MALIRICE LUBANGA	n/a	7937329	Solar user	
8	EVERLYNE MURENJEKHA	0700240301	21671009	Solar user	
9	MIRIAM ATILA	0792499308	n/a	Solar user	
10	Ahmed Jengale	N/A	0567726	Solar user	ARNEST
11	Hardley Malema	0711147938	31781623	REWMOS	
12					

Activity organised by: Hardley Malema SIGNATURE: DATE: 13/3/2019

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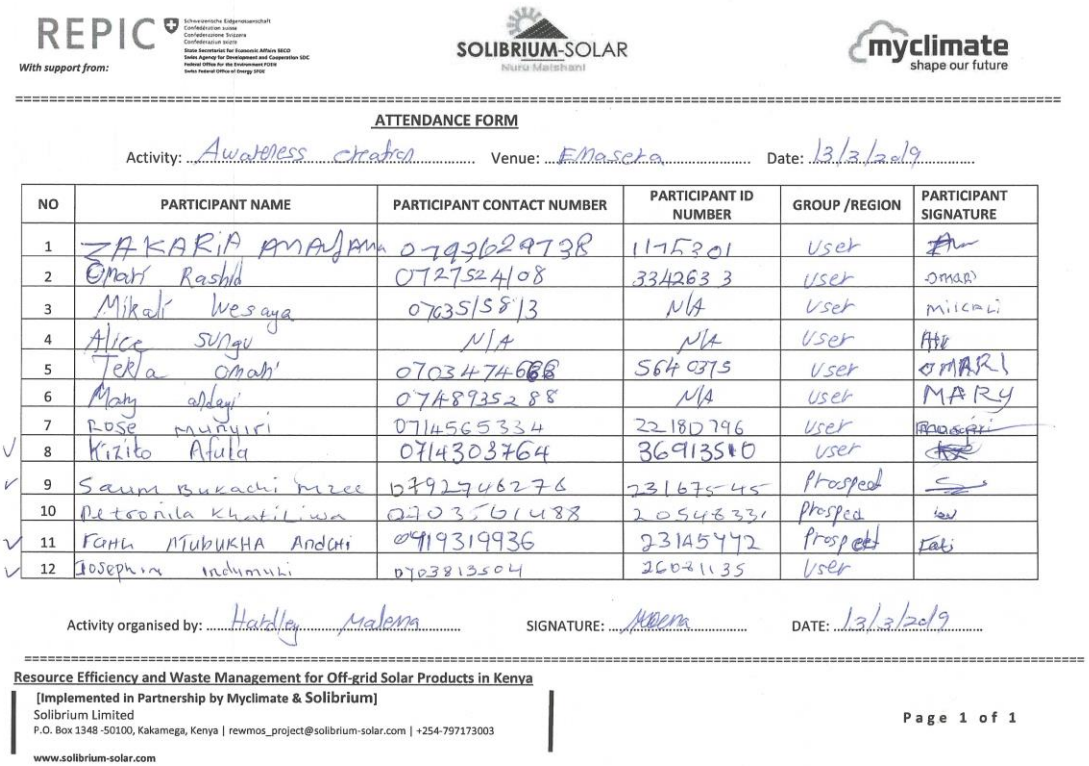

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Activity: Awareness creation Venue: Emasete Date: 13/3/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	ZAKARIA AMANJAMA	0792629738	1175301	User	
2	Omari Rashid	0727524108	33426333	User	Omari
3	Mikali Wesaya	0735158113	N/A	User	Mikali
4	Alice Sungu	N/A	N/A	User	
5	Tekla Omari	0703474688	564 0375	User	OMARI
6	Mary alday'	0748935288	N/A	User	MARY
7	Rose Mumyiri	0714565334	22180796	User	
8	Kizito Afula	0714303764	36913510	User	
9	Saum Bukachi Mzee	0792746276	23167545	Prospect	
10	Petronila Khatiliwa	0703561488	20548331	Prospect	
11	Fahd Mubukha Andati	0719319936	23145472	Prospect	Fati
12	Josephine Indimuli	0703813504	26041135	User	

Activity organised by: Hadley Malema SIGNATURE: Malema DATE: 13/3/2019

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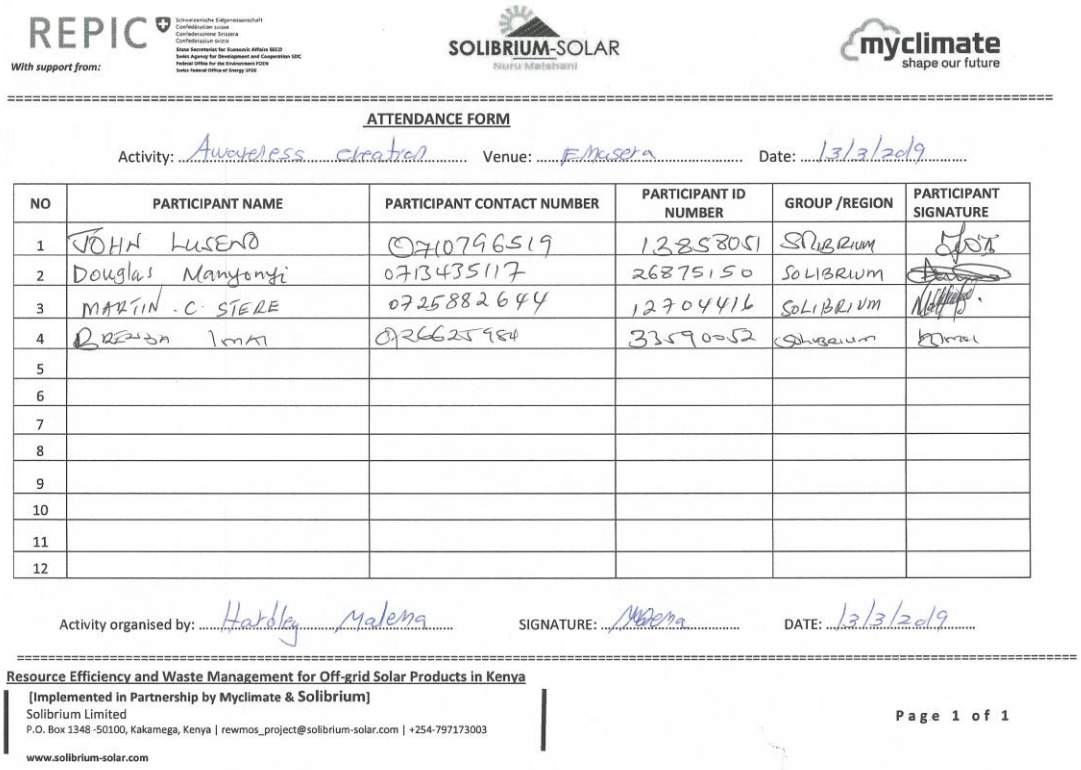

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Activity: Awareness creation Venue: Emusera Date: 13/3/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	JOHN LUSENO	0710796519	12858051	SOLIBRIUM	
2	Douglas Manyonyi	0713435117	26875150	SOLIBRIUM	
3	MARTIN .C. STERE	0725882644	12704416	SOLIBRIUM	
4	[illegible]	0726625984	33590052	SOLIBRIUM	
5					
6					
7					
8					
9					
10					
11					
12					

Activity organised by: Hardly Malena SIGNATURE: DATE: 13/3/2019

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3.SOLYO AWARENESS CREATION REPORT.

Date: 14th March 2019.

A group photo of all solar users and prospects who attended the 3rd REWMOS Awareness creation.

The Awareness was attended by 72 solar users, 8 prospect solar users,2 county government officials and 1 E waste Expert. The awareness proceeding was led by REWMOS Project Coordinator, Hardley Malema in Liaison with John Luseno and Douglas Manyonyi.

Demonstration of solar product parts

Different types of Solar Home Systems and their components were displayed and Solibrium's' technical person explained to them what role each item plays. The components included; batteries, Panels, Bulbs, Cables/wires and a Television set.

The technician also explained the lifespan of each components as follows :(Batteries-5 years, Panels -25 years and bulbs – 30,000 working hours).

What is E waste?

E-waste refers to electronic products nearing the end of their "useful life", for example, solar components, computers and televisions. Many of these products can be reused, refurbished, or recycled.

What should be done with E waste?

Reduce, reuse, and recycle. Reduce your generation of e-waste through smart procurement and good maintenance. Reuse still-functioning electronic equipment by donating or selling it to someone. Recycle those components that cannot be repaired. Most electronic devices contain a variety of materials, including metals that can be recycled.

Best practices to enhance Efficiency, Extend the life span of Solar Home Systems.

All the participants were asked if they were aware of any good practices rather how they were maintaining their kits at the moment. Most of them said they were doing the following:

- Cleaning their components.
- Proper charging their kits.
- Keeping the components away from the children.

All the SHS users were given graphic best practices bronchure written in both English and Kiswahili.The technician then went through with each of the best practice as well as illustrating so as to ensure the users have a better understanding on the need to maintain and how to maintain their kits in order to extend the kits lifespan.

Expert Advice on best practices

Use

- Regularly clean solar panels and other components.For the solar panel,water with no detergent should be used with no detergent for effective charging.
- Install panels in well protected areas away from children and their preferred play areas.
- Always be careful when handling the components to avoid breaking as a result of their delicate nature.
- Always plug in recommended components to right usb or charging ports to avoid short circuiting of the components.
- Install solar panels at an angle that allows maximum exposure of sunlight especially at peak hours of sunlight around mid-day.
- Storage of the battery in a safe place away from children interference and fire sources.
- Contact qualified technicians for proper diagnosis,advice and repair of faulty components.
- Always ensure the battery is fully charged.
- Do not power faulty or multiple components.
- Always read the user manual and use the components designed for the system.
- For flooded batteries, periodically top up battery acid.

Disposal

For end users

- Take obsolete solar components to designated collection points for proper recycling/disposal,or consult relevant authorities e.g NEMA or your seller for advice.
- Call REWMOS on 0797173003 for advice.
- Do not dispose the batteries on open land or latrines
- Do not burn the obsolete solar components.
- Call and return the products to the suppliers at the end of life.
- Read and keep all the documents issued at the date of purchase for advice on disposal practices.

County of Government Remarks on E waste.

- The Ministry of Environment is working on the county E waste bill.
- Partnerships with private sector such as REWMOS will be initiated.
- There has been an increase of solar components in the region and Waste will soon be an issue to address.
- Without proper disposal,the negative impacts can affect our environment,water body sources and human life.
- More awareness to be done to the solar users.
- The county has started training of technicians in the polytechnics.

- Opening up of collection points.
- Incentives to be given to companies that will address E waste.

Negative Impacts of E waste.

- Impact on the environment:immediate and direct impact of inappropriate recycling or disposal of end of life products will mean local contamination for example through harzadous materials used in batteries.
- Dumping electronics in a landfill creates a big problem for the environment since for example the batteries contain lithium ion that is toxic. The different toxic substances can also pollute water making it unsafe for drinking. Improper dumping of electronic waste affects the environment as a whole ad this includes all types of creatures. When the chemicals are released to the atmosphere, every living this is negatively impacted. This also includes the air and the soil, practically; anything that comes into contact with electronic waste is at risk.
- E waste contains materials that are toxic such as lead,mercury which are harmful to the environment and human health if improperly managed.The impacts on health can bring damage or implications to reproduction,liver,kidneys,blood,respiratory,heart and lungs.

Feedback summary from the participants on collection of obsolete components

- Some solar users would want to be REWMOS agents where they collect obsolete solar components and deliver to REWMOS at a fee.
- Incentives to be given to solar users who return the components.
- Partnerships to be done with local technicians.
- Every solar component to be brought back as E waste including wires.
- REWMOS to collect obsolete components from other solar companies.

Lease Model

- Lease model was welcomed by the participants.
- All were in agreement that the lease model would also help in tracking of the comonents and getting of the volumes required.

Feedback summary from the participants

- A total of 6 prospects were interested in trying out the lease model that would be rolled out in the next phase. All their details were recorded. Also a questionnaire was given to participants for feedback on the awareness. A total of 61 participants were interviewed.
- In general, Most of the solar kits possessed by the solar users were between 1 to 6 years.None of the solar components had malfunctioned since purchase. Regarding E waste, most of the

respondents had an excellent level of understanding of E waste/Solar waste. Also, they acknowledged that they had learnt about REWMOS, how to maintain their components and proper disposal. None of the participants had knowledge of anyone else collecting obsolete solar components.All respondents would want to collect obsolete solar components in exchange for monetary gain.

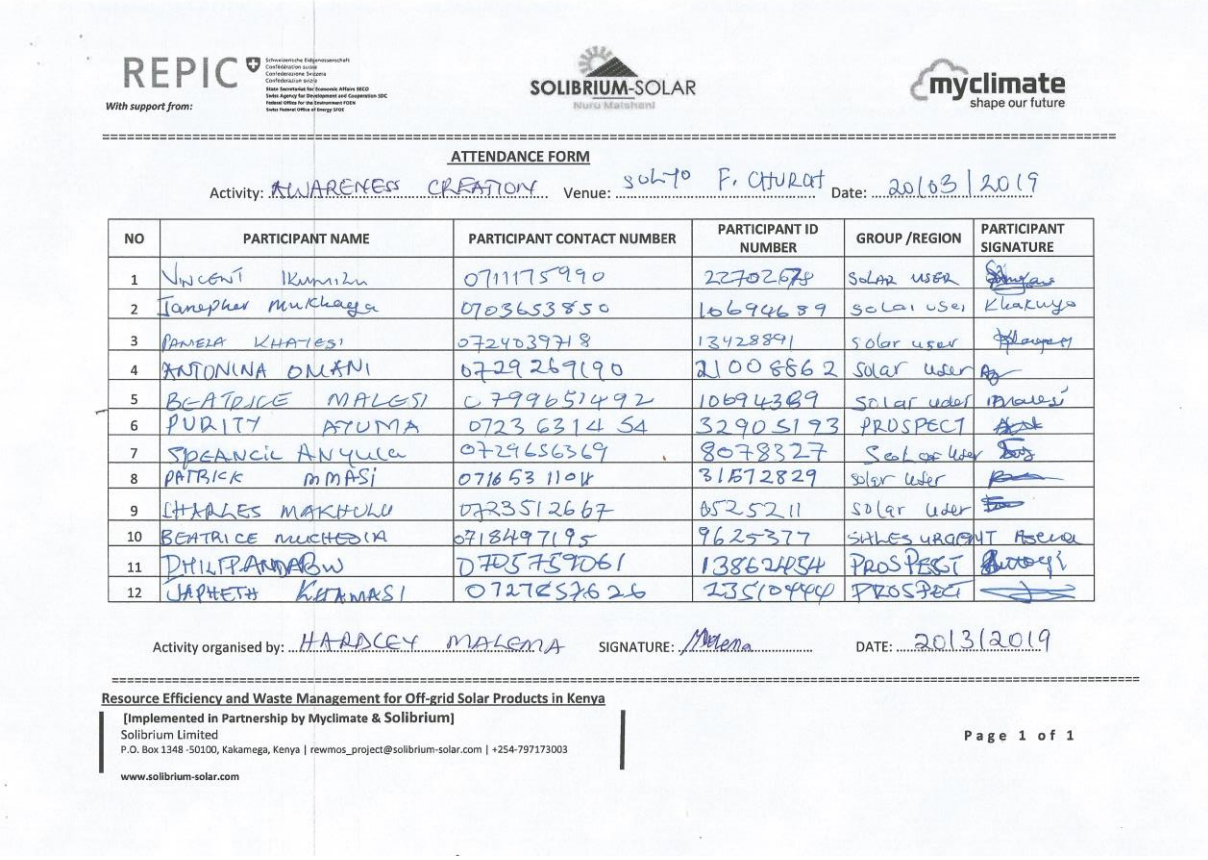
PICTORIAL


Figures above show Eric Guantai,E waste expert explaining on E waste.

Figure above shows Zablon Shilenje,County Of Government of Kakamega giving his speech.


Figures above are pictures from the awareness creation.

Appendix 3: Training Attendance register



REPIC — With support from: — SOLIBRIUM-SOLAR Nuru Maishani — myclimate shape our future

ATTENDANCE FORM

Activity: AWARENESS CREATION Venue: SOLAR F. CHURCH Date: 20/03/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	VINCENT IKUMU	0711175990	22702678	SOLAR USER	
2	Jacopher MUKhaya	0703653850	16946859	solar user	Khakuya
3	PAMELA KHATESI	0724039718	13428891	solar user	
4	ANTONINA OMANI	0729269190	21008662	solar user	
5	BEATRICE MALESI	C799651492	10694389	solar user	
6	PURITY ATUMA	0723 6314 54	32905193	PROSPECT	
7	SPEANCIL ANYULA	0729656369	8078327	Solar User	
8	PATRICK MMASI	0716 53 1104	31572829	solar user	
9	CHARLES MAKHULU	0723512667	8525211	solar user	
10	BEATRICE MUCHEDIA	0718497195	9625377	SOLAR URGENT	
11	PHILIP ANDREW	0705759061	13862454	PROSPECT	
12	JAPHETH KITAMASI	0727657626	23510444	PROSPECT	

Activity organised by: HARACEY MALEMA SIGNATURE: DATE: 20/3/2019

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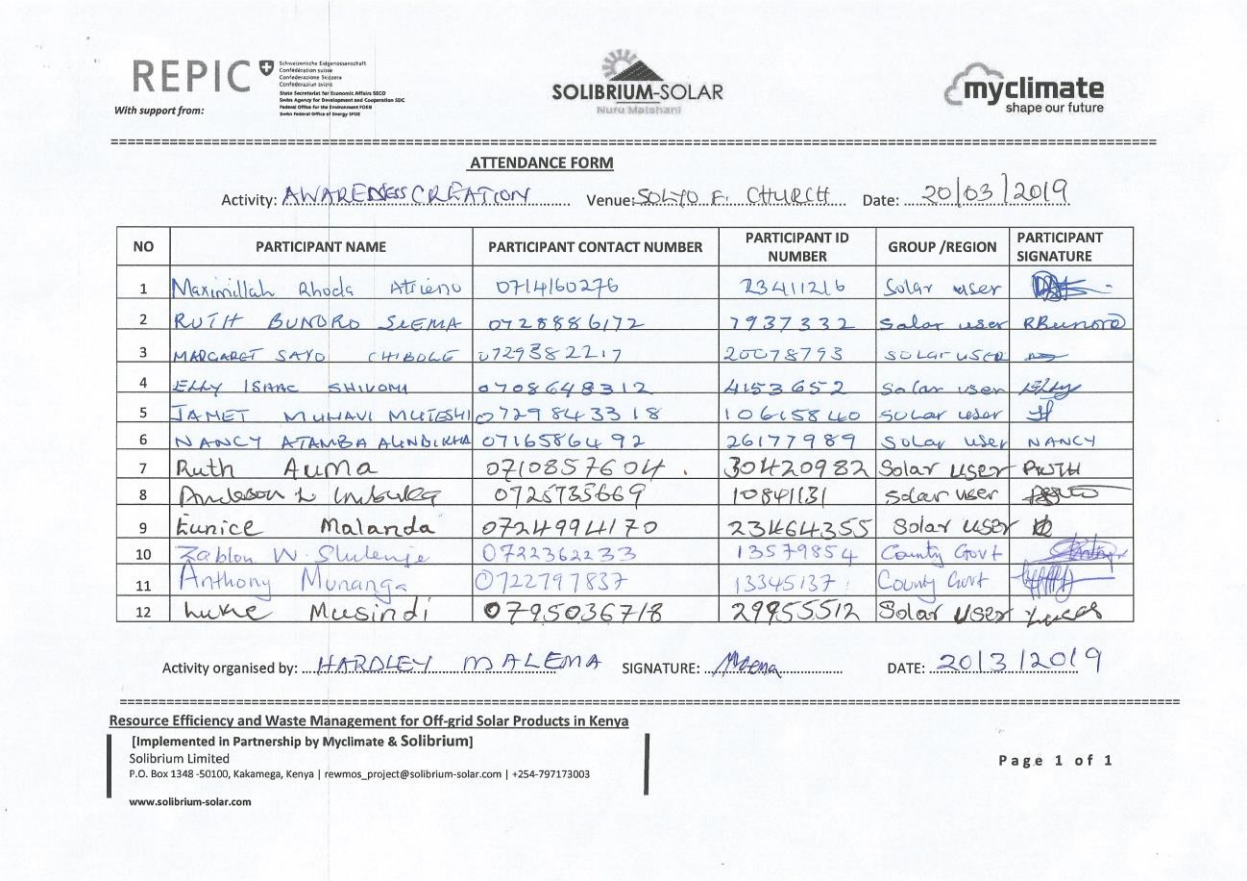

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ATTENDANCE FORM

Activity: AWARENESS CREATION Venue: SOLIBRIUM F. CHURCH Date: 20/03/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	Maximillah Rhoda Atieno	0714160276	23411216	Solar user	
2	RUTH BUNDRO SLEMA	0728886172	7937332	Solar user	RBundro
3	MARGARET SAYO CHIBOGO	0729382217	20078793	SOLAR USER	
4	ELLY ISAAC SHIKOMU	0708648312	41536552	Solar user	
5	JANET MUHAVI MUTESHI	0729843318	10615860	SOLAR USER	
6	NANCY ATAMBA ALUNDIKHA	0716586492	26177989	SOLAR USER	NANCY
7	Ruth Auma	0710857604	30420982	Solar user	RUTH
8	Anderson N Lubuka	0725735669	10841131	Solar user	
9	Eunice Malanda	0724994170	23464355	Solar user	
10	Zablon W. Shulenje	0722362233	13579854	County Govt	
11	Anthony Munanga	0722797837	13345137	County Govt	
12	Luke Musindi	0795036718	29955512	Solar User	

Activity organised by: HARALEY MALEMA SIGNATURE: DATE: 20/3/2019

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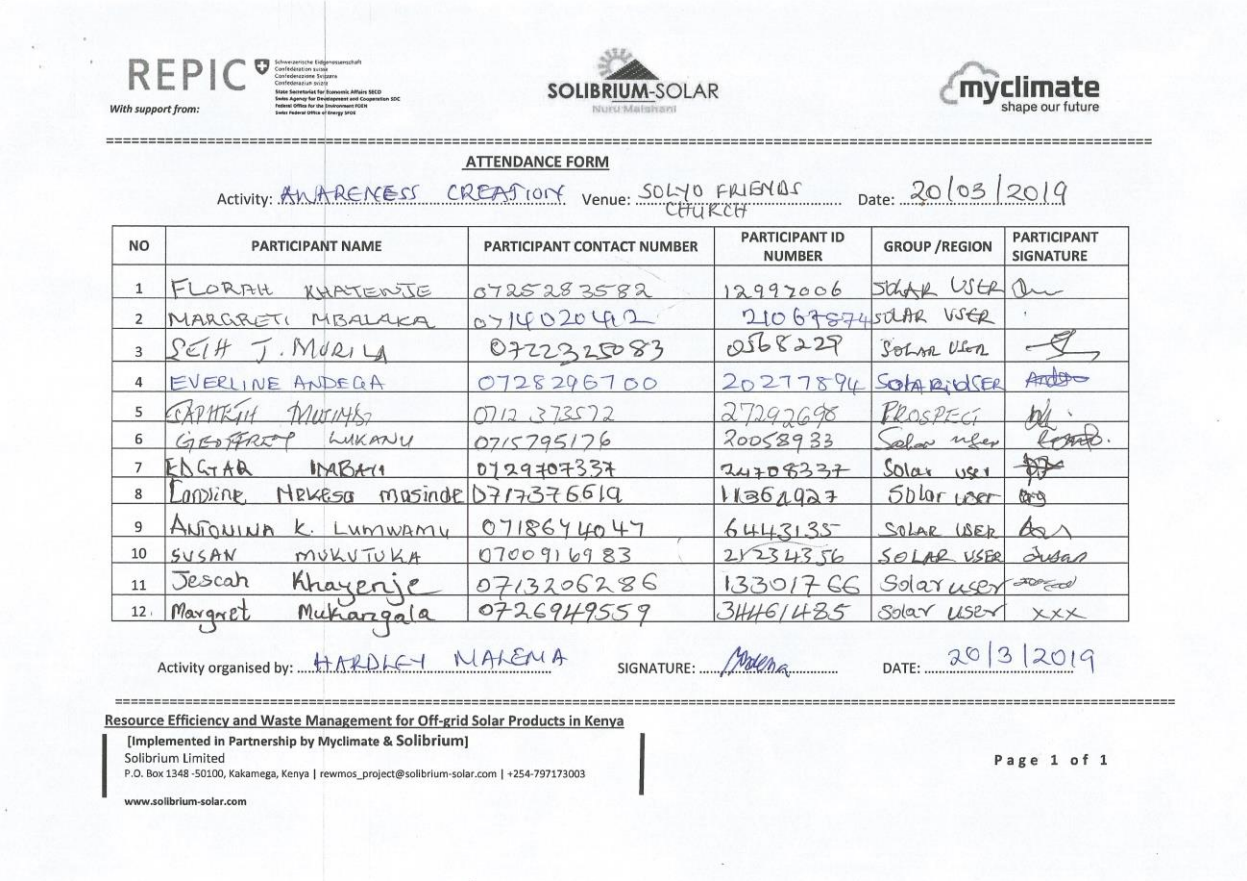

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ATTENDANCE FORM

Activity: AWARENESS CREATION Venue: SOLYO FRIENDS CHURCH Date: 20/03/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	FLORAH KHATENJE	0725283582	12997006	SOLAR USER	
2	MARGRETI MBALAKA	0714020402	21067874	SOLAR USER	
3	SETH J. MURILA	0722325083	0568229	SOLAR USER	
4	EVERLINE ANDEGA	0728296700	20277894	SOLAR USER	
5	SAPHEGH MUSINGA	0712 373572	27292698	PROSPECT	
6	GEOFFREY LUKANU	0715795176	20058933	Solar user	
7	EDGAR IMBAYI	0729707337	24708337	Solar user	
8	Caroline Mekesa Masinde	0717376619	11364927	Solar user	
9	ANTONINA K. LUMWAMU	0718674047	6443135	SOLAR USER	
10	SUSAN MUKUTUKA	0700916983	25234356	SOLAR USER	
11	Jescah Khayenje	0713206286	13301766	Solar user	
12	Margret Mukangala	0726949559	3HH61485	Solar user	xxx

Activity organised by: HARDLEY MAKENA SIGNATURE: DATE: 20/3/2019

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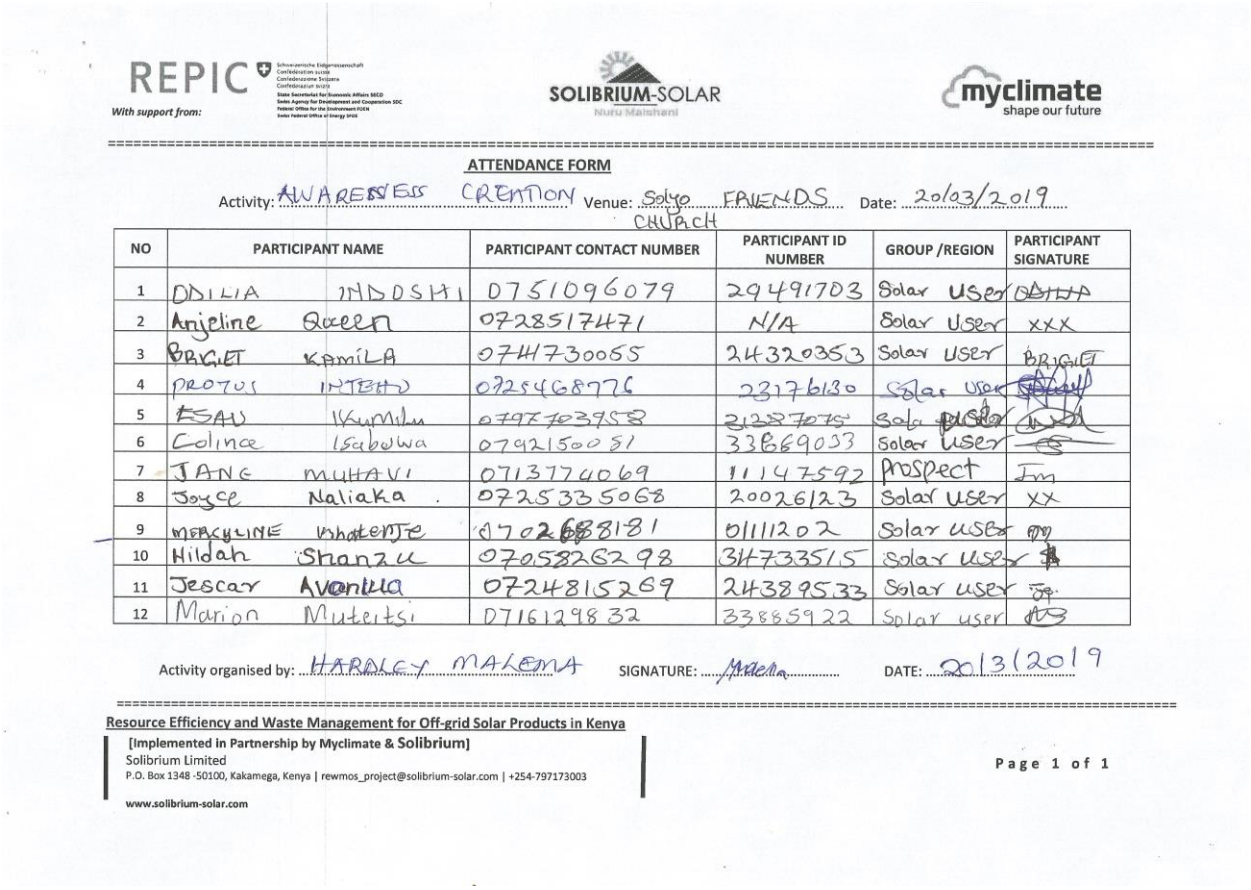

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ATTENDANCE FORM

Activity: AWARENESS CREATION Venue: Solyo FRIENDS CHURCH Date: 20/03/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	DILIA INDOSHI	0751096079	29491703	Solar User	
2	Angeline Queen	0728517471	N/A	Solar User	XXX
3	BRIGIET KAMILA	07H730055	24320353	Solar User	BRIGIET
4	PROTUS INTEHO	0254668776	23176130	Solar User	
5	ESAU Wanjiku	0797703958	21287075	Solar User	
6	Colince Isabuwa	0792150051	33869033	Solar User	
7	JANE MUHAVI	0713774069	11147592	Prospect	Jm
8	Joyce Naliaka	0725335068	20026123	Solar User	XX
9	MERCYLINE Khatenje	0702688181	0111202	Solar User	
10	Hildah Shanzu	0705826298	31733515	Solar User	
11	Jescar Avonilla	0724815269	24389533	Solar User	
12	Marion Muteitsi	07161298 32	33885922	Solar user	

Activity organised by: HARDLEY MALEMA SIGNATURE: DATE: 20/3/2019

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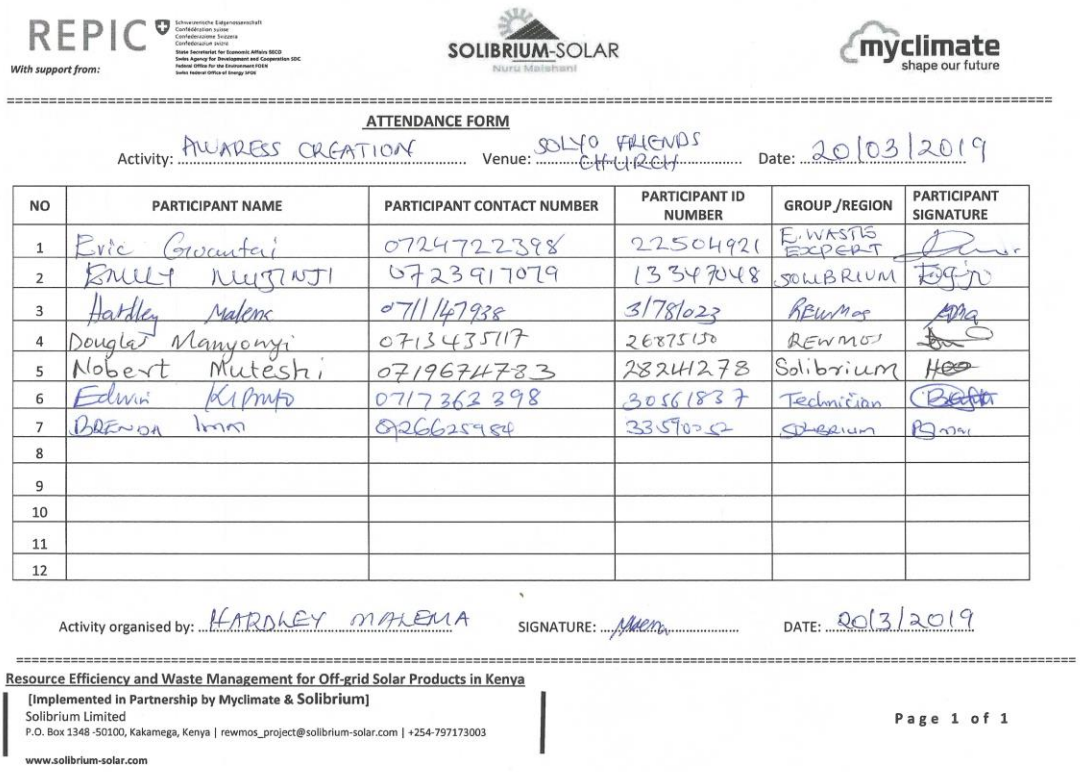

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ATTENDANCE FORM

Activity: AWARESS CREATION Venue: SOLYO FRIENDS CHURCH Date: 20/03/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	Eric Gucuntai	0724722398	22504921	E. WASTES EXPERT	
2	BRILLY NYUGUNJI	0723917079	13347048	SOLIBRIUM	
3	Hartley Malema	0711147938	31781023	REWMos	
4	Douglas Manyonyi	0713435117	26875150	REWMOS	
5	Nobert Mutesh i	0719674783	28241278	Solibrium	
6	Edwin Kimuto	0717362398	30561837	Technician	
7	BRENDA Imm	0726625984	33590352	SOLIBRIUM	
8					
9					
10					
11					
12					

Activity organised by: HARDLEY MALEMA SIGNATURE: DATE: 20/3/2019

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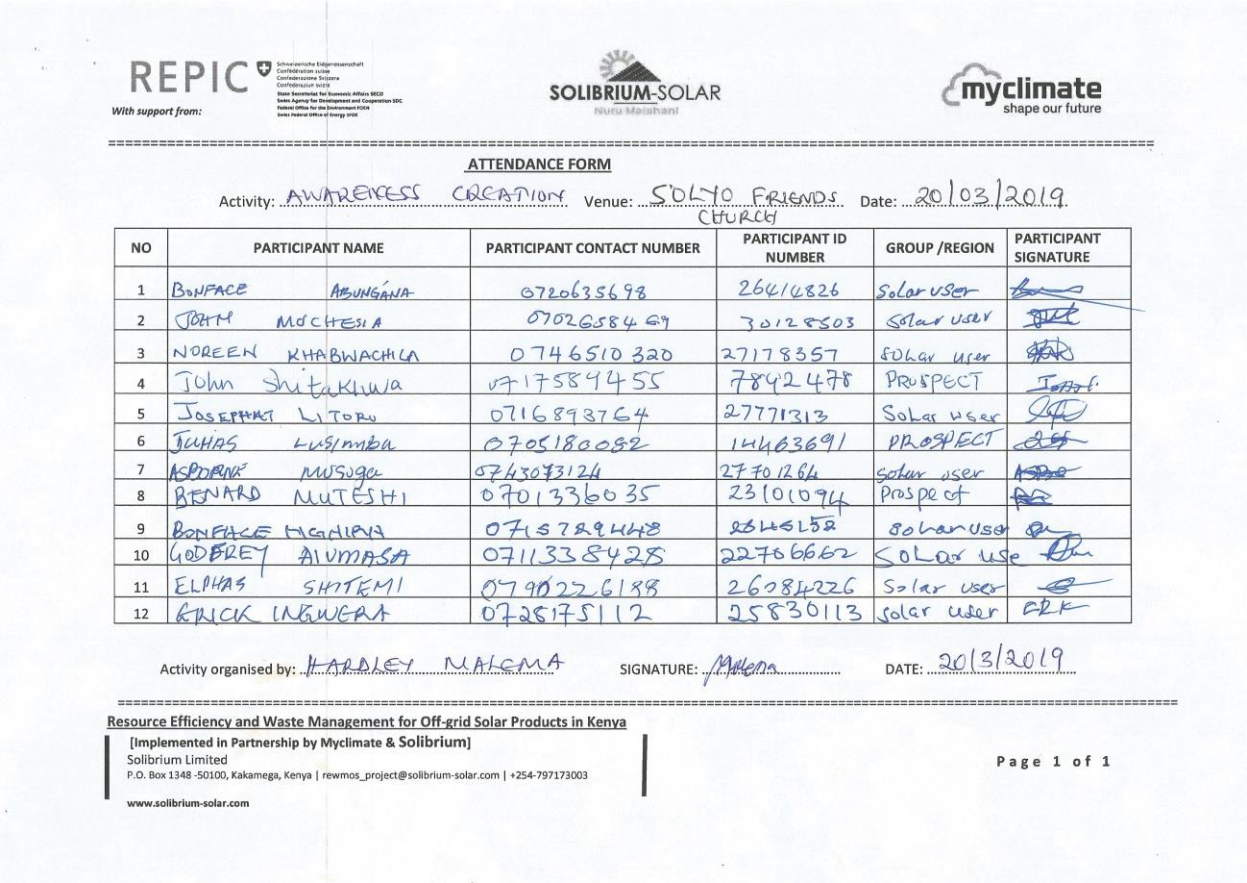

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ATTENDANCE FORM

Activity: AWARENESS CREATION Venue: SOLYO FRIENDS CHURCH Date: 20/03/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	BONFACE ABUNGANA	0720635698	26416826	Solar user	
2	JOHN MOCHESIA	0702658469	30128503	Solar user	
3	NOREEN KHABWACHILA	0746510320	27178357	Solar user	
4	John Shitakhwa	0717584455	7842478	PROSPECT	
5	JOSEPHAT LITORU	0716893764	27771313	Solar user	
6	ELIHAS LUSIMBA	0705180082	14463691	PROSPECT	
7	ASPORINE MUSOGA	0743073124	27701264	solar user	
8	BENARD MUTESHI	0701336035	23101094	Prospect	
9	BONFACE MGHENYA	0715729448	23465152	Solar user	
10	GODFREY ALUMASA	0711338428	22706662	SOLar use	
11	ELIHAS SHITEMI	0790226188	26084226	Solar user	
12	ERICK INGUGA	0725175112	25830113	solar user	

Activity organised by: HARDLEY MALEMA SIGNATURE: MALEMA DATE: 20/3/2019

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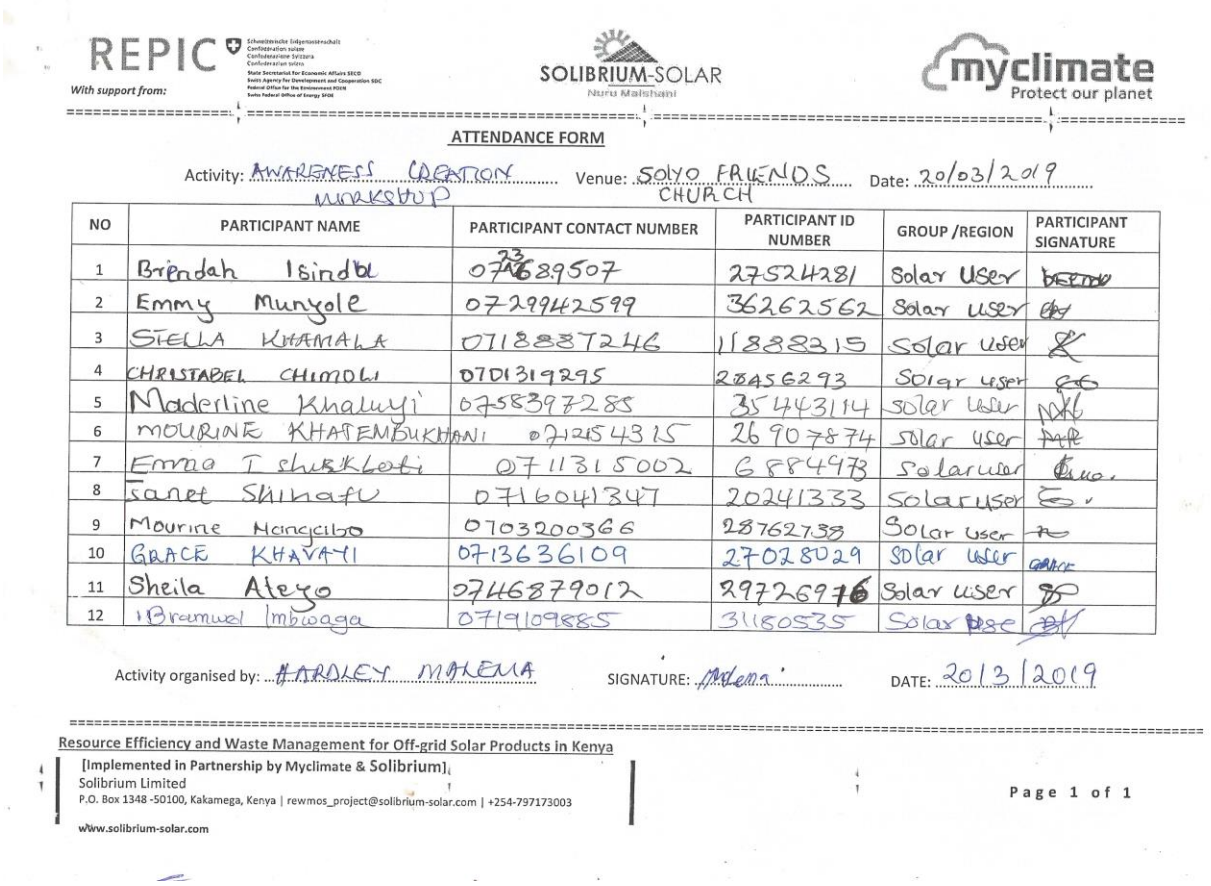

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ATTENDANCE FORM

Activity: AWARENESS CREATION WORKSHOP Venue: SOLYO FRIENDS CHURCH Date: 20/03/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	Brendah Isindu	0723689507	27524281	Solar User	
2	Emmy Munyole	0729942599	36262562	Solar User	
3	STELLA KHAMALA	0718887246	11888315	Solar User	
4	CHRISTABEL CHIMOLI	0701319295	28456293	Solar User	
5	Madeline Khalwyi	0758397285	35443114	Solar User	
6	MOURINE KHATEMBUKHANI	0712543125	26907874	Solar User	
7	Emma Tshikhoti	0711315002	6884973	Solar user	
8	Janet Shihafu	0716041347	20241333	Solar user	
9	Mourine Nangeibo	0703200366	28762738	Solar User	
10	GRACE KHAVAYI	0713636109	27028029	Solar User	
11	Sheila Alego	0746879012	29726976	Solar User	
12	Braemwel Imbwaga	0719109885	31180535	Solar User	

Activity organised by: HARDLEY MAKENA SIGNATURE: DATE: 20/3/2019

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4. ICHINGO AWARENESS CREATION REPORT.

Date:4th April 2019

A group photo of all solar users and prospects who attended the 4th REWMOS Awareness creation.

The Awareness was attended by 26 solar users and 5 prospects. The awareness proceeding was led by REWMOS Project Coordinator, Hardley Malema in Liaison with John Luseno and Douglas Manyonyi.

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Demonstration of solar product parts

Different types of Solar Home Systems and their components were displayed and Solibrium's' technical person explained to them what role each item plays. The components included; batteries, Panels, Bulbs, Cables/wires and a Television set.

The technician also explained the lifespan of each components as follows :(Batteries-5 years, Panels -25 years and bulbs – 30,000 working hours).

Many of these products can be reused, refurbished, or recycled whenever they reach their end of life and therefore the products should not be thrown away, burn or left unattended to. The REWMOS project would advise on what to do with the obsolete components.

Best practices to enhance Efficiency, Extend the life span of Solar Home Systems.

The participants were asked if they were aware of any good practices rather how they were maintaining their kits at the moment. The responses were as follows:

- Cleaning panels using soapy water
- Some suggested that they believed the rain would wash away the dusty parts on the panel.

SHS users were given graphic best practices bronchure written in both English and Kiswahili.The technician then went through with each of the best practice as well as illustrating so as to ensure the users have a better understanding on the need to maintain and how to maintain their kits in order to extend the kits lifespan.

Expert Advice on best practices

Use

- Regularly clean solar panels and other components. For the solar panel, water with no detergent should be used with no detergent for effective charging.
- Install panels in well protected areas away from children and their preferred play areas.
- Always be careful when handling the components to avoid breaking as a result of their delicate nature.
- Always plug in recommended components to right usb or charging ports to avoid short circuiting of the components.
- Install solar panels at an angle that allows maximum exposure of sunlight especially at peak hours of sunlight around mid-day.
- Storage of the battery in a safe place away from children interference and fire sources.
- Contact qualified technicians for proper diagnosis,advice and repair of faulty components.
- Always ensure the battery is fully charged.
- Do not power faulty or multiple components.

==========

- Always read the user manual and use the components designed for the system.
- For flooded batteries, periodically top up battery acid.

Disposal

For end users

- Take obsolete solar components to designated collection points for proper recycling/disposal,or consult relevant authorities e.g NEMA or your seller for advice.
- Call REWMOS on 0797173003 for advice.
- Do not dispose the batteries on open land or latrines
- Do not burn the obsolete solar components.
- Call and return the products to the suppliers at the end of life.
- Read and keep all the documents issued at the date of purchase for advice on disposal practices.

Negative Impacts of E waste.

- Impact on the environment:immediate and direct impact of inappropriate recycling or disposal of end of life products will mean local contamination for example through harzadous materials used in batteries.
- Dumping electronics in a landfill creates a big problem for the environment since for example the batteries contain lithium ion that is toxic. The different toxic substances can also pollute water making it unsafe for drinking. Improper dumping of electronic waste affects the environment as a whole ad this includes all types of creatures. When the chemicals are released to the atmosphere, every living this is negatively impacted. This also includes the air and the soil, practically; anything that comes into contact with electronic waste is at risk.
- E waste contains materials that are toxic such as lead,mercury which are harmful to the environment and human health if improperly managed.The impacts on health can bring damage or implications to reproduction,liver,kidneys,blood,respiratory,heart and lungs.

Feedback summary from the participants on collection of obsolete components

- Incentives to be given to solar users who return the components.
- REWMOS to collect obsolete components from other solar companies.

Questions asked by participants about the REWMOS project

- If Solibrium can clean the components from clients since some women cannot climb up the houses.
- Can panels be brought back if they are broken by children accidentally?
- Will the obsolete components be replaced?

Lease Model

- Lease model was welcomed by the participants even though it should be transparent whereby solar components should not be taken back if they are in working conditions.

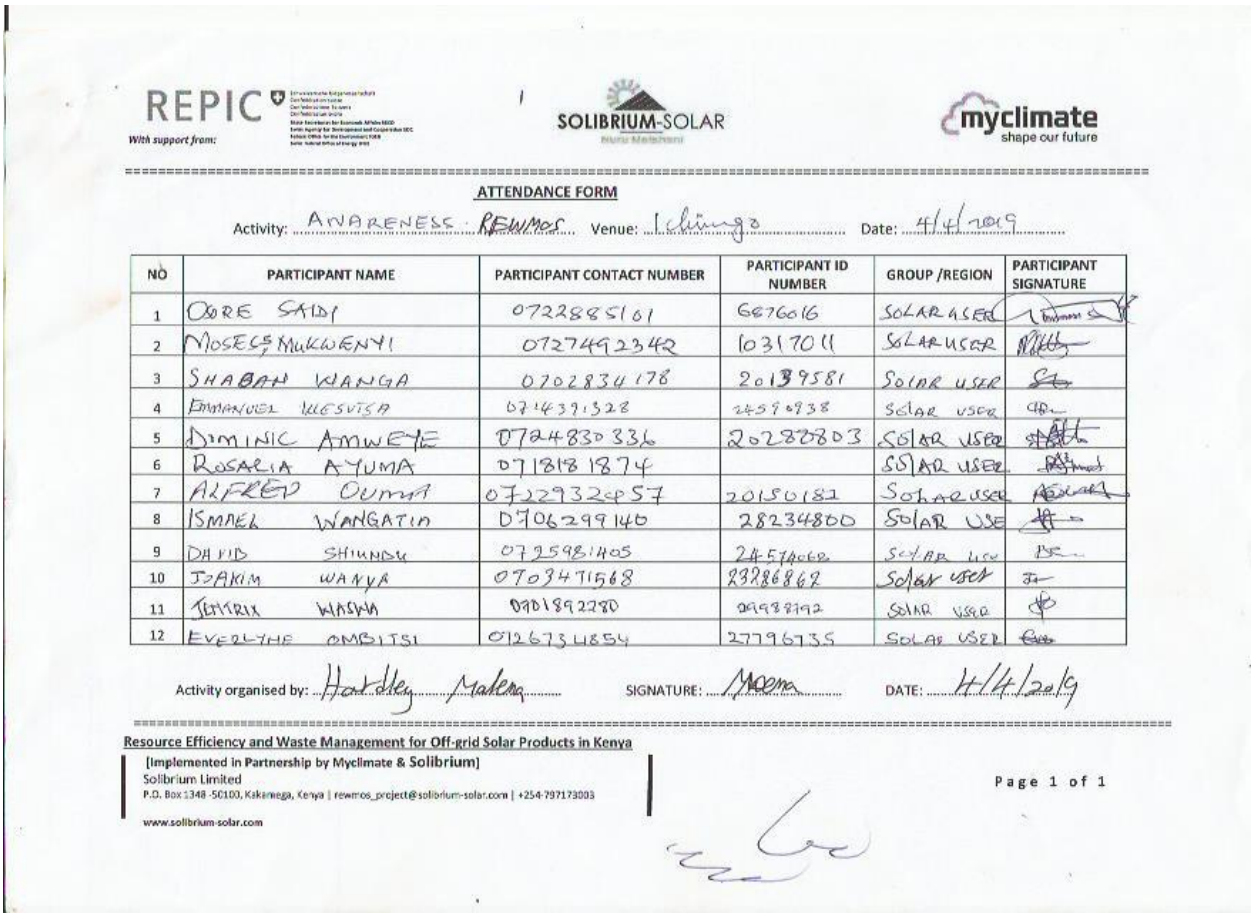
Feedback summary from the participants

- A total of 4 prospects were interested in trying out the lease model that would be rolled out in the next phase. All their details were recorded. Also a questionnaire was given to participants for feedback on the awareness. A total of 33 participants were interviewed.
- In general, Most of the solar kits possessed by the solar users were between 1 to 2 years and all were in use. Regarding E waste, most of the respondents acknowledged that after the awareness, they now had an excellent level of understanding of not only E waste. Also, they acknowledged that they had learnt about REWMOS, how to use and maintain their components as well proper disposal.
- All the participants had no type of E waste in their households. They intend to return the solar products to the sellers once the products reach the

PICTORIAL

Figures above are pictures from the awareness creation.

Appendix 4: Training Attendance register



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ATTENDANCE FORM

Activity: ANARENESS REWMOS Venue: Ichinga Date: 4/4/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	OORE SAIDI	0722885101	6676016	SOLAR USER	
2	MOSES MUKWENYI	0727492342	10317011	SOLAR USER	
3	SHABAN WANGA	0702834178	20139581	SOLAR USER	
4	EMMANUEL LUCSVISA	0714391328	24590938	SOLAR USER	
5	DOMINIC AMWEYE	0724830336	20288803	SOLAR USER	
6	ROSARIA AYUMA	0718181874		SOLAR USER	
7	ALFRED OUMA	0722932457	20150182	SOLAR USER	
8	ISMAEL WANGATIA	0706299140	28234800	SOLAR USE	
9	DAVID SHIUNDU	0725981405	24576660	SOLAR USE	
10	JOAKIM WANYA	0703471568	23286862	SOLAR USER	
11	JEMIMA WASWA	0701892280	29988792	SOLAR USER	
12	EVERLYNE OMBITSI	0726734854	27796735	SOLAR USER	

Activity organised by: Hartley Makena SIGNATURE: DATE: 4/4/2019

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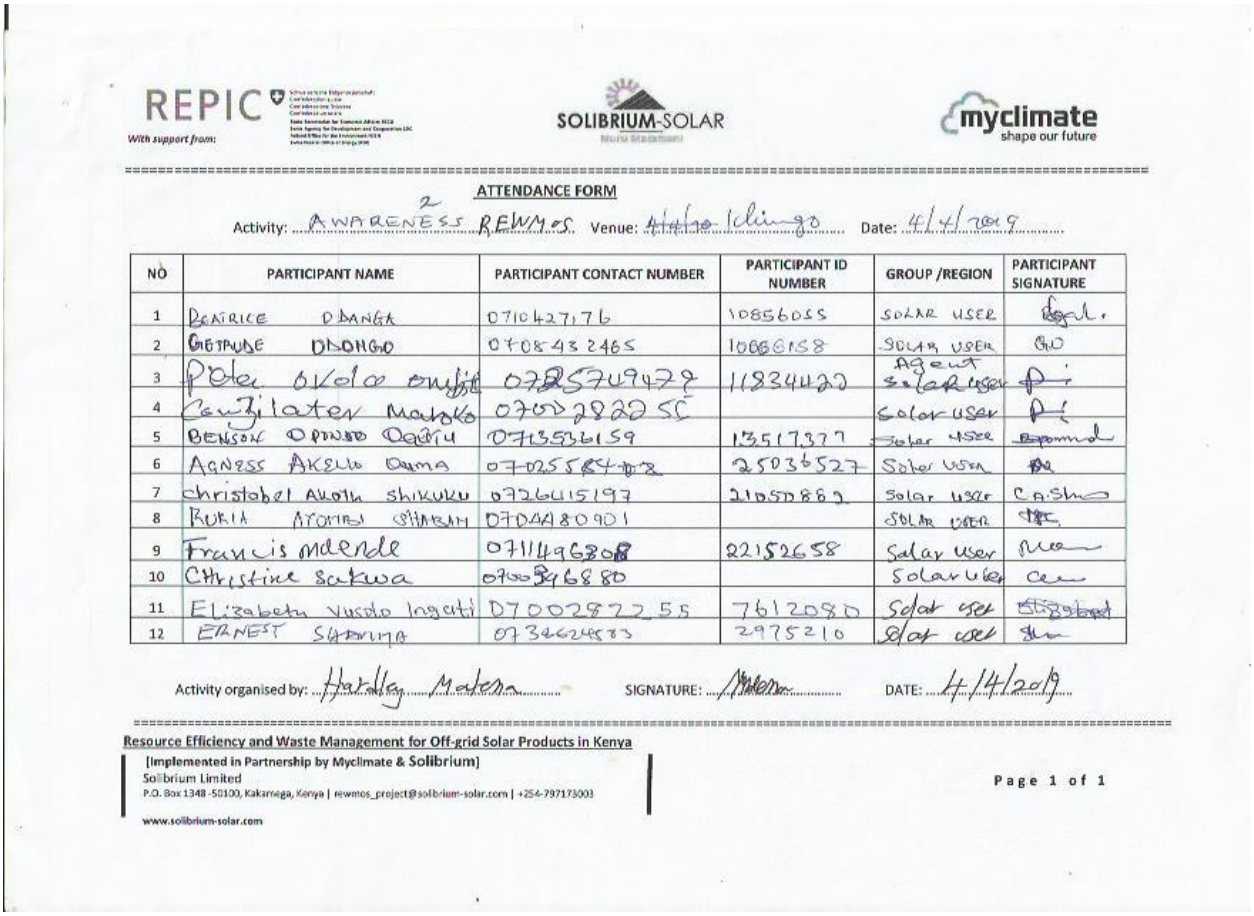

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ATTENDANCE FORM

Activity: AWARENESS REWMOS Venue: Idumbo Date: 4/4/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	BEATRICE DANGA	0710427176	10856055	SOLAR USER	
2	GERTRUDE DIDHGO	0708432465	10866158	SOLAR USER	
3	Peter Okolo Onyiso	0725749479	11834422	Agent Solar user	
4	Cenjilaten Mabolo	0705 2822 55		Solar user	
5	BENSON OPONDO OGUTU	0713536159	13517377	Solar user	
6	AGNESS AKELLO Dama	0702558478	25036527	Solar User	
7	christabel ALOYO SHIKUKU	0726415197	21057869	Solar user	
8	RUKIA ATOMAI SHAKAM	0704480901		SOLAR USER	
9	Francis Mdendl	0711496808	22152658	Solar User	
10	Christine Sakwa	0705946880		Solar User	
11	Elizabeth Yusdo Ingati	D7002822_55	7612080	Solar user	
12	ERNEST SAMOMA	0734624583	2975210	Solar user	

Activity organised by: Harilly Matera SIGNATURE: DATE: 4/4/2019

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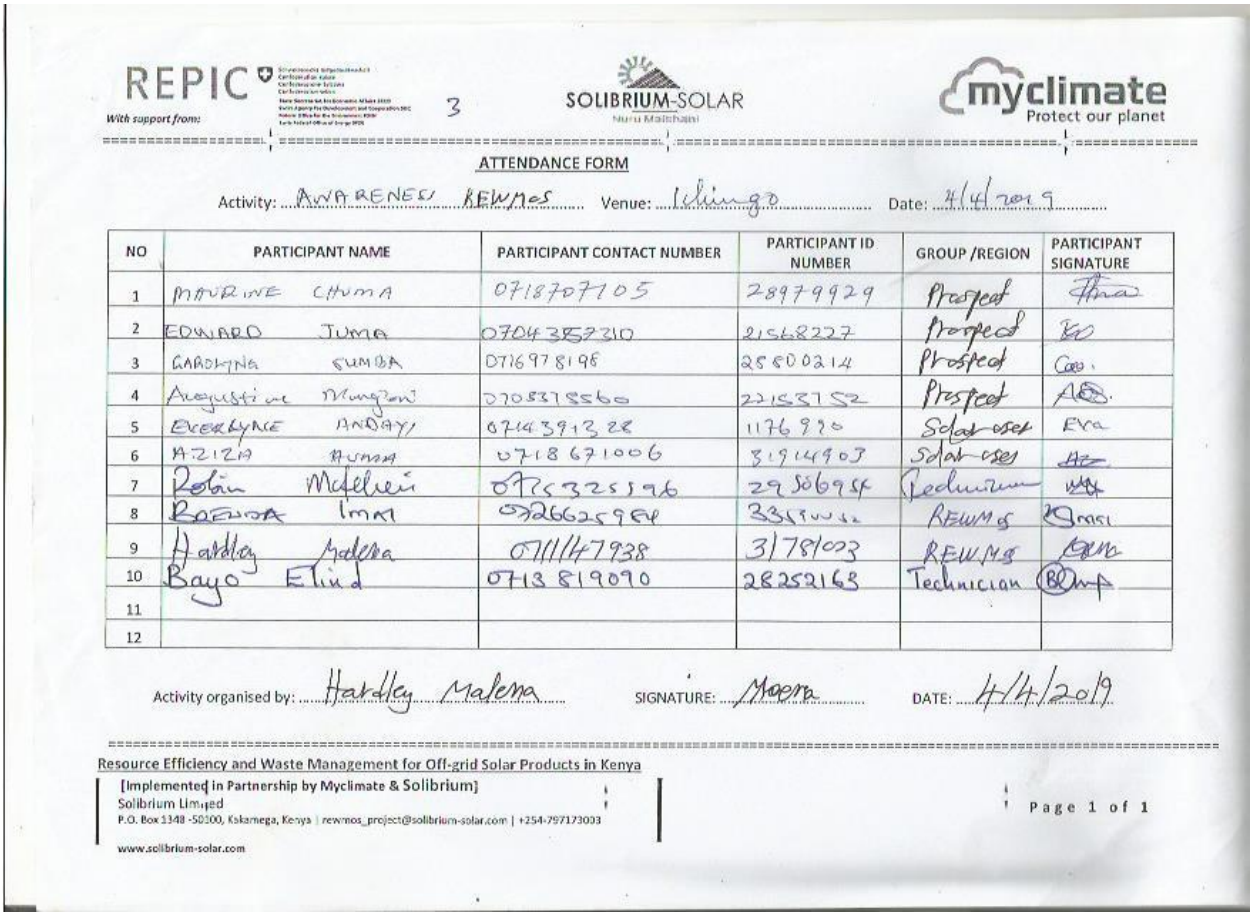

REPIC 3 SOLIBRIUM-SOLAR Nuru Maishani myclimate Protect our planet

With support from:

ATTENDANCE FORM

Activity: AWARENESS REWMOS Venue: Iliungo Date: 4/4/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	MAURINE CHUMA	0718707105	28979929	Prospect	
2	EDWARD JUMA	0704352310	21568227	Prospect	
3	CAROLYNE SUMBA	0716978198	25600214	Prospect	
4	Augustine Mungai	0705375560	22153752	Prospect	
5	EVERLYNE ANDAYI	0714391328	1176990	Solar user	Eva
6	AZIZA HUMMA	0718671006	31914903	Solar user	
7	Robin Mafelwa	0715325596	29506954	Technician	
8	BAENDA IMMA	0726625964	33[illegible]12	REWMOS	
9	Hardley Malena	0711147938	31781023	REWMOS	
10	Bayo Elind	0713819090	28252163	Technician	
11					
12					

Activity organised by: Hardley Malena SIGNATURE: DATE: 4/4/2019

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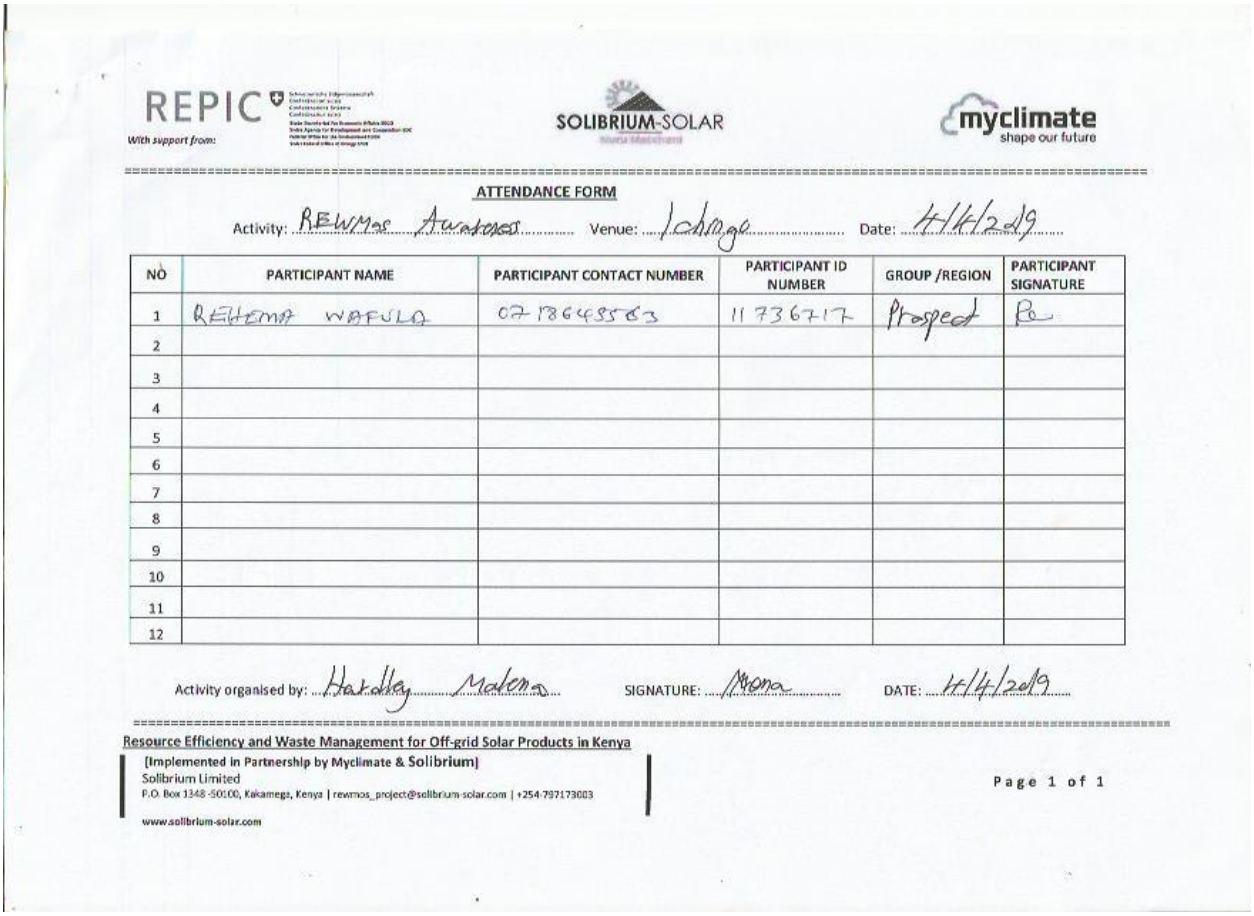

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ATTENDANCE FORM

Activity: REWMos Awareness Venue: Ichinga Date: 4/4/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	REHEMA WAFULA	0718645583	11736717	Prospect	Re
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

Activity organised by: Hartley Malema SIGNATURE: Mona DATE: 4/4/2019

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5.ESHIAKHULO AWARENESS CREATION REPORT.

Date:10th April 2019

A group photo of all solar users and prospects who attended the 5th REWMOS Awareness creation.

The Awareness was attended by 30 solar users, 6 prospect solar users, and 1 technician. The awareness proceeding was led by REWMOS Project Coordinator, Hardley Malema in Liaison with Douglas Manyonyi.

Demonstration of solar product parts

Different types of Solar Home Systems and their components were displayed and Solibrium's' technical person explained to them what role each item plays. The components included; batteries, Panels, Bulbs, Cables/wires and a Television set.

The technician also explained the lifespan of each components as follows :(Batteries-5 years, Panels -25 years and bulbs – 30,000 working hours

What is E waste?

The participants were also told on what is E waste and how solar components are part of waste once they become obsolete.

E-waste refers to electronic products nearing the end of their "useful life", for example, solar components, computers and televisions. Many of these products can be reused, refurbished, or recycled.

What should be done with E waste?

Reduce, reuse, and recycle. Reduce your generation of e-waste through smart procurement and good maintenance. Reuse still-functioning electronic equipment by donating or selling it to someone. Recycle those components that cannot be repaired. Most electronic devices contain a variety of materials, including metals that can be recycled.

Best practices to enhance Efficiency, Extend the life span of Solar Home Systems.

All the participants were asked if they were aware of any good practices rather how they were maintaining their kits at the moment. Most of them said they were doing the following:

- Cleaning their components.
- Keeping the components away from the children.

All the SHS users were given graphic best practices bronchure written in both English and Kiswahili.The technician then went through with each of the best practice as well as illustrating so as to ensure the users have a better understanding on the need to maintain and how to maintain their kits in order to extend the kits lifespan.

Expert Advice on best practices

Use

- Regularly clean solar panels and other components.For the solar panel,water with no detergent should be used with no detergent for effective charging.
- Install panels in well protected areas away from children and their preferred play areas.
- Always be careful when handling the components to avoid breaking as a result of their delicate nature.
- Always plug in recommended components to right usb or charging ports to avoid short circuiting of the components.
- Install solar panels at an angle that allows maximum exposure of sunlight especially at peak hours of sunlight around mid-day.
- Storage of the battery in a safe place away from children interference and fire sources.
- Contact qualified technicians for proper diagnosis,advice and repair of faulty components.
- Always ensure the battery is fully charged.
- Do not power faulty or multiple components.
- Always read the user manual and use the components designed for the system.
- For flooded batteries, periodically top up battery acid.

Disposal

For end users

- Take obsolete solar components to designated collection points for proper recycling/disposal,or consult relevant authorities e.g NEMA or your seller for advice.
- Call REWMOS on 0797173003 for advice.
- Do not dispose the batteries on open land or latrines
- Do not burn the obsolete solar components.
- Call and return the products to the suppliers at the end of life.
- Read and keep all the documents issued at the date of purchase for advice on disposal practices.

Negative Impacts of E waste.

- Impact on the environment:immediate and direct impact of inappropriate recycling or disposal of end of life products will mean local contamination for example through harzadous materials used in batteries.
- Dumping electronics in a landfill creates a big problem for the environment since for example the batteries contain lithium ion that is toxic. The different toxic substances can also pollute water making it unsafe for drinking. Improper dumping of electronic waste affects the environment as a whole ad this includes all types of creatures. When the chemicals are released to the atmosphere, every living this is negatively impacted. This also includes the air and the soil, practically; anything that comes into contact with electronic waste is at risk.

- E waste contains materials that are toxic such as lead,mercury which are harmful to the environment and human health if improperly managed.The impacts on health can bring damage or implications to reproduction,liver,kidneys,blood,respiratory,heart and lungs.

Feedback summary from the participants on collection of obsolete components

- Some solar users would like to enlighten the communities as Tot's (Train of trainees).
- Some solar users are women and getting on top of roofs to clean the components is not easy.
- Solibrium to talk to manufacturers to extend average life of the battery.
- Incentives to be done on those who have completed payment.
- If Solibrium can also take back torches and wires.
- Some solar users would want to be REWMOS agents where they collect obsolete solar components and deliver to REWMOS at a fee.
- REWMOS to collect obsolete components from other solar companies.

Lease Model

- Lease model was welcomed by the participants.
- The prospects were told they should not expect compensation during collection of those products.

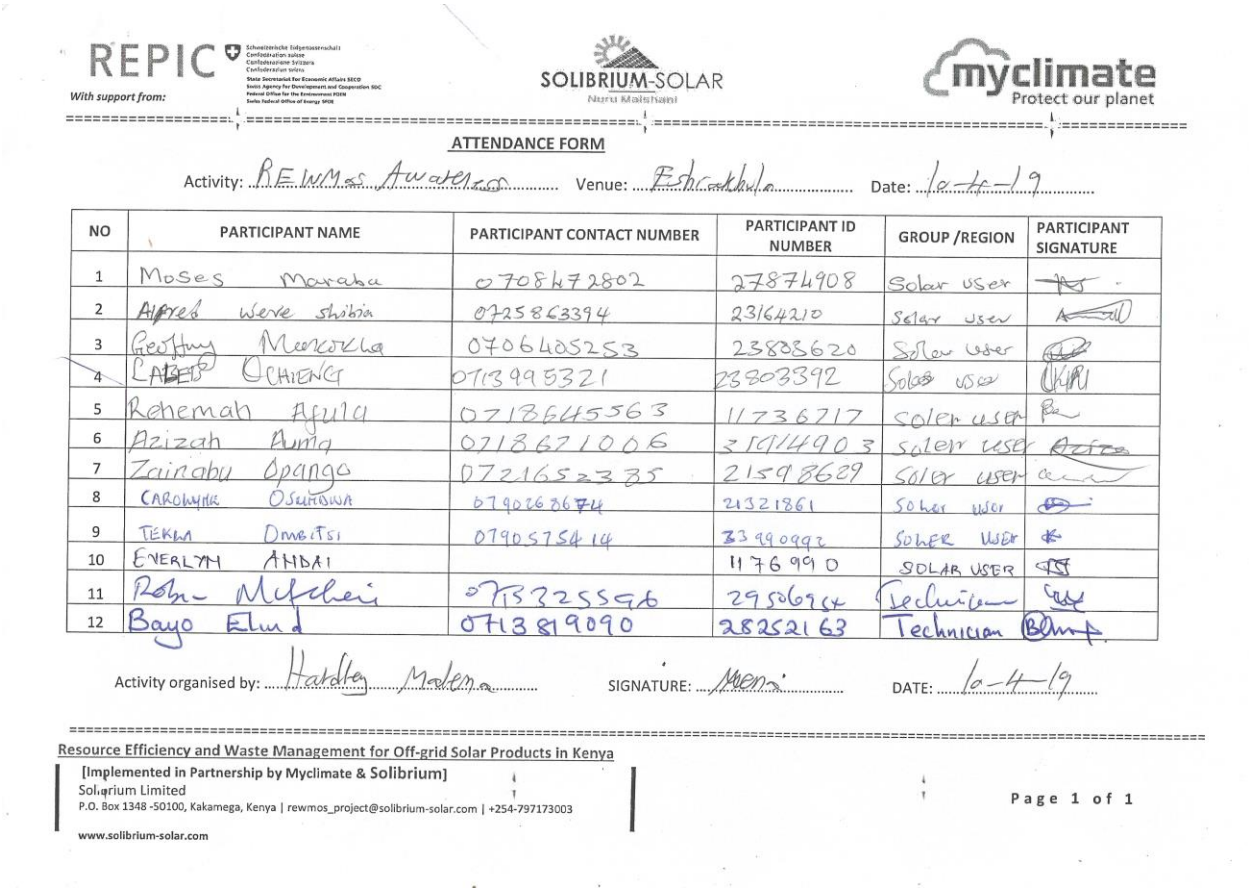
Feedback summary from the participants

- 1 prospect was interested in trying out the lease model that would be rolled out in the next phase. All their details were recorded. Also a questionnaire was given to participants for feedback on the awareness. A total of 27 participants were interviewed.
- In general, Most of the solar kits possessed by the solar users were between 3 months to 1 year. None of the solar components had malfunctioned since purchase. Regarding E waste, all the respondents acknowledged that after the awareness, they now had an excellent level of understanding of not only E waste/Solar waste. Also,they acknowledged that they had learnt about REWMOS, how to maintain their components and proper disposal. A good number reported that they would contact REWMOS return to company for proper disposal, they also requested for compensation or a replacement at a reduced cost whenever they return the components.

PICTORIAL

Figures above shows explanation of the best practices and interactive sessions.

Appendix 5: Training Attendance register



REPIC Schweizerische Eidgenossenschaft Confédération suisse Confederazione Svizzera Confederaziun svizra
State Secretariat for Economic Affairs SECO
Swiss Agency for Development and Cooperation SDC
Federal Office for the Environment FOEN
Swiss Federal Office of Energy SFOE
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ATTENDANCE FORM

Activity: REWMOS Awareness Venue: Eshikhulo Date: 10-4-19

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	Moses Mwaka	0708472802	27874908	Solar user	
2	Alfred Were Shibia	0725863394	23164210	Solar user	
3	Geoffrey Mwongera	0706405253	23838620	Solar user	
4	LABAN OCHIENG	0713995321	23803392	Solar user	
5	Rahemah Afula	0718644563	11736717	Solar user	
6	Azizah Numa	0718671006	31014903	Solar user	
7	Zainabu Opango	0721652335	21598629	Solar user	
8	CAROLYNE OSUNDWA	0790268674	21321861	Solar user	
9	TEKLA DIMBITSI	0790575414	33990992	SOLAR USER	
10	EVERLYN ANDAI		11769900	SOLAR USER	
11	Robin Mufchei	0715325546	29506954	Technician	
12	Bayo Elmd	0713819090	28252163	Technician	

Activity organised by: Hardley Maleva SIGNATURE: DATE: 10-4-19

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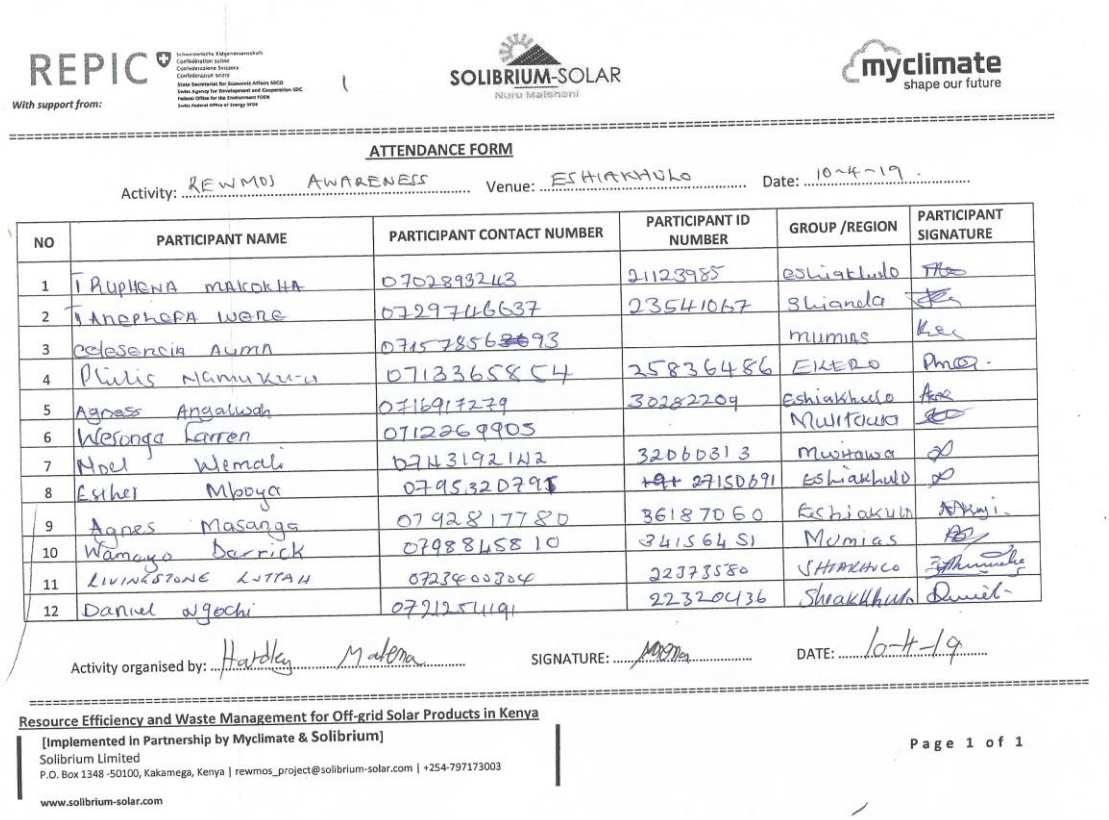

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ATTENDANCE FORM

Activity: REWMOS AWARENESS Venue: ESHIAKHULO Date: 10-4-19

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	RUPHENA MAKOKHA	0702893243	21123985	ESHIAKHULO	
2	ANEPHORA WORE	0729746637	23541067	Shianda	
3	Celesencia Auma	0715785693		Mumias	
4	Phillis Nanukuli	0713365854	25836486	EMERO	
5	Agness Angalwa	0716917279	30282209	Eshiakhulo	
6	Weronga Farren	0712269905		Mwihawa	
7	Noel Wemali	D7H3192IN2	32060313	Mwihawa	
8	Esther Mboya	0795320795	27150691	Eshiakhulo	
9	Agnes Masanga	0792817780	36187060	Eshiakhulo	
10	Wamaya Derrick	0798845810	34156451	Mumias	
11	LIVINGSTONE LUTTAH	0723400304	22373580	SHIAKHULO	
12	Daniel Ngochi	0721254191	22320436	Shiakhulo	

Activity organised by: Hartley Madera SIGNATURE: DATE: 10-4-19

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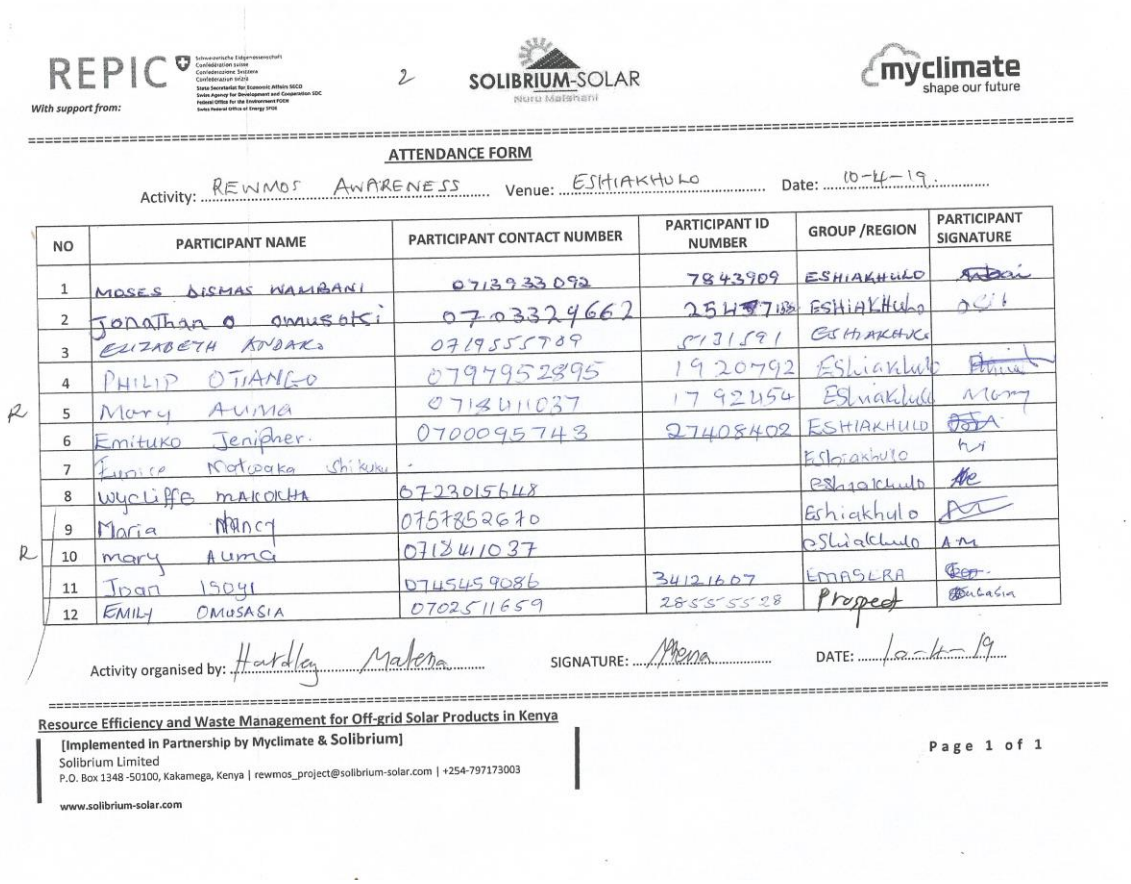

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ATTENDANCE FORM

Activity: REWMOS AWARENESS Venue: ESHIAKHULO Date: 10-4-19

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	MOSES DISMAS WAMBANI	0713933092	7843909	ESHIAKHULO	
2	JONATHAN O OMUSOKSI	0703324662	25487158	ESHIAKHULO	
3	ELIZABETH ANDAKA	0719555709	8131591	ESHIAKHULO	
4	PHILIP OTIANGO	0797952895	19207192	ESHIAKHULO	
R 5	Mary Auma	0718411037	17 92454	ESHIAKHULO	
6	Emituko Jenipher	0700095743	27408402	ESHIAKHULO	
7	Eunice Kotopaka Shikuku			ESHIAKHULO	
8	Wycliffe MAKOKHA	0723015648		ESHIAKHULO	
9	Maria Nancy	0757852670		ESHIAKHULO	
R 10	mary AUMA	0718411037		ESHIAKHULO	
11	Joan ISOYI	0745459086	34121607	EMASLRA	
12	EMILY OMUSASIA	0702511659	28555528	Prospect	

Activity organised by: Hardley Makena SIGNATURE: DATE: 10-4-19

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ATTENDANCE FORM

Activity: REWMOS AWARENESS Venue: ESITAKITULO Date: 10-4-19.

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	Fatuma Maina Abakalwe	0714825017	9890545	Prospect	
2	TOMMEY MAKOKHA MUSOTSI			Prospect	
3	BRENDA IMAI	0726259184	33590052	Prospect	
4	Bayo Eliud	0713819090	28252163	Technician	
5	Hardley Malema	0711147938	31781623	REWMOS	
6	Douglas Mangoyi	0713435117	25875150	Rewmos	
7					
8					
9					
10					
11					
12					

Activity organised by: Hardley Malema SIGNATURE: Malema DATE: 10-4-19

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6.MUNDOVERWA AWARENESS CREATION REPORT.

Date: 11th April 2019.

A group photo of all solar users and prospects who attended the 6th REWMOS Awareness creation.

The Awareness was attended by 61 solar users, 6 prospect solar users, and 1 technician. The awareness proceeding was led by REWMOS Project Coordinator, Hardley Malema.

Demonstration of solar product parts

Different types of Solar Home Systems and their components were displayed and Solibrium's' technical person explained to them what role each item plays. The components included; batteries, Panels, Bulbs, Cables/wires and a Television set.

The technician also explained the lifespan of each components as follows :(Batteries-5 years, Panels -25 years and bulbs – 30,000 working hours).

These components can be reused, refurbished, or recycled whenever they reach their end of life and therefore the products should not be thrown away, burn or left unattended to.

Best practices to enhance Efficiency, Extend the life span of Solar Home Systems.

The participants were how they were maintaining their kits. The responses were as follows:

- Cleaning the panels.
- Connecting the components correctly.
- Disconnecting battery from the solar when its fully charged.
- Some suggested that they believed the rain would wash away the dusty parts on the panel.

SHS users were given graphic best practices bronchure written in both English and Kiswahili.The technician then went through with each of the best practice as well as illustrating so as to ensure the users have a better understanding on the need to maintain and how to maintain their kits in order to extend the kits lifespan.

Expert Advice on best practices

Use

- Regularly clean solar panels and other components. For the solar panel, water with no detergent should be used with no detergent for effective charging.
- Install panels in well protected areas away from children and their preferred play areas.
- Always be careful when handling the components to avoid breaking as a result of their delicate nature.
- Always plug in recommended components to right usb or charging ports to avoid short circuiting of the components.
- Install solar panels at an angle that allows maximum exposure of sunlight especially at peak hours of sunlight around mid-day.

- Storage of the battery in a safe place away from children interference and fire sources.
- Contact qualified technicians for proper diagnosis,advice and repair of faulty components.
- Always ensure the battery is fully charged.
- Do not power faulty or multiple components.
- Always read the user manual and use the components designed for the system.
- For flooded batteries, periodically top up battery acid.

Disposal

For end users

- Take obsolete solar components to designated collection points for proper recycling/disposal,or consult relevant authorities e.g NEMA or your seller for advice.
- Call REWMOS on 0797173003 for advice.
- Do not dispose the batteries on open land or latrines
- Do not burn the obsolete solar components.
- Call and return the products to the suppliers at the end of life.
- Read and keep all the documents issued at the date of purchase for advice on disposal practices.

Negative Impacts of E waste.

- Impact on the environment:immediate and direct impact of inappropriate recycling or disposal of end of life products will mean local contamination for example through harzadous materials used in batteries.
- Dumping electronics in a landfill creates a big problem for the environment since for example the batteries contain lithium ion that is toxic. The different toxic substances can also pollute water making it unsafe for drinking. Improper dumping of electronic waste affects the environment as a whole ad this includes all types of creatures. When the chemicals are released to the atmosphere, every living this is negatively impacted. This also includes the air and the soil, practically; anything that comes into contact with electronic waste is at risk.
- E waste contains materials that are toxic such as lead,mercury which are harmful to the environment and human health if improperly managed.The impacts on health can bring damage or implications to reproduction,liver,kidneys,blood,respiratory,heart and lungs.

Feedback summary from the participants on collection of obsolete components

- Incentives to be given to solar users who return the components.
- Obsolete components to be weighed and rewarded monetarily.
- REWMOS to collect obsolete components from other solar companies.

Questions asked by participants about the REWMOS project

- If REWMOS will address stolen components.
- Is it bad to use more bulbs than recommeneded?

- Is their a way to increase the batteries lifespan?
- Will Solibrium replace the obsolete components?
- Should a battery be disconnected when its fully charged?
- Will Solibrium replace faulty bulbs?
- How will collection of the batteries be done well so as to discourage stealing?
- T shirts to be given for awareness.

Lease Model

- Lease model was welcomed by the participants even though the company should not switch the components off and claim that they are obsolete.
- Lease model to be incorporated in PAYG.

Feedback summary from the participants

- A questionnaire was given to participants for feedback on the awareness. A total of 42 participants were interviewed.
- In general, Most of the solar kits possessed by the solar users were between 1 month to 1 year. None of the solar components had malfunctioned since purchase. Regarding E waste, all the respondents acknowledged that after the awareness, they now had an excellent level of understanding of E waste. They acknowledged that they had learnt about REWMOS, how to use/maintain their components and proper disposal. A good number reported that they would contact REWMOS return to company for proper disposal. All of the participants agreed to recommend our E waste solutions to other solar users not sold by Solibrium.

==========

PICTORIAL

Figures above are pictures from the awareness creation.

Appendix 6: Training Attendance register

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ATTENDANCE FORM

Activity: REWMOS AWARENESS Venue: MJINDO YERIKA Date: 11-4-19

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	Christine Omurunga	0718108155	8019903	Solar user	
2	William Imbumi	0723512567	18954660	Solar user	
3	Antony Andenga	0795032604	24594911	Solar user	
4	Zaphania A.M. OYALE	0728 544 340	7635792	solar user	
5	ROSMARY NYONGE	0717497 3988	9620371	solar user	
6	JOHNSTONE SHIMULI	0718107718	25919790	Solar user	
7	JOSEFINA LIHABI		6393006	Prospect	
8	ROSELYNE ANDALA	0798205717	32484481	Prospect	
9	Samuel Kocha	0716563669	25742343	Prospect	
10	ROSE MUKUNGU	0716537369	25847633	Prospect	
11	Fanisa Abutti	0718761926	0567131	Prospect	Fanisa Abutti
12.	Nathaniel Mukolwe	0951491 84	10478029	Prospect	

Activity organised by: Hardley Mokoma SIGNATURE: DATE: 11-4-19

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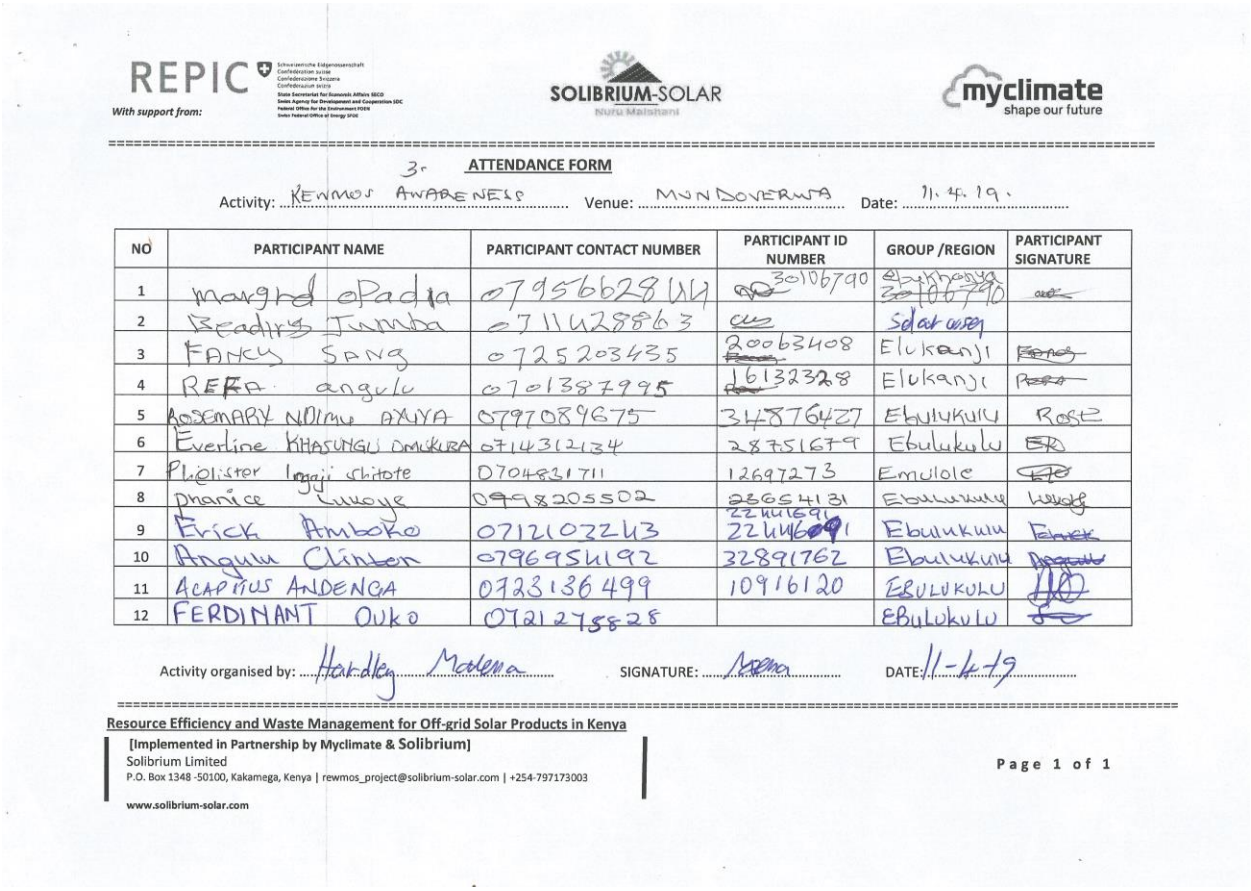

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3.

ATTENDANCE FORM

Activity: KEWMOS AWARENESS Venue: MUNDOVERWA Date: 11.4.19.

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	margret oPadia	0795662814	30106790	Elukanji	
2	Beatrice Juma	0711428863		Sdat area	
3	FANCY SANG	0725203435	20063408	Elukanji	
4	REFA angulu	0701387995	16132328	Elukanji	
5	ROSEMARY NDIMU AKUYA	0797089675	34876427	Ebulukulu	Rose
6	Everline KHASUNGU OMUKUBA	0714312134	28751679	Ebulukulu	ER
7	Pholister Inyaji shitote	0704831711	12697273	Emulole	
8	phanice Luvoye	0798205502	25654131	Ebulukulu	Luvoye
9	Erick Amboko	0712102243	22446091	Ebulukulu	Erick
10	Angulu Clinton	0796954192	32891762	Ebulukulu	
11	ACAPIUS ANDENGA	0723136499	10916120	EBULUKULU	
12	FERDINANT OUKO	0721278528		EBULUKULU	

Activity organised by: Hardley Malenya SIGNATURE: DATE: 11-4-19

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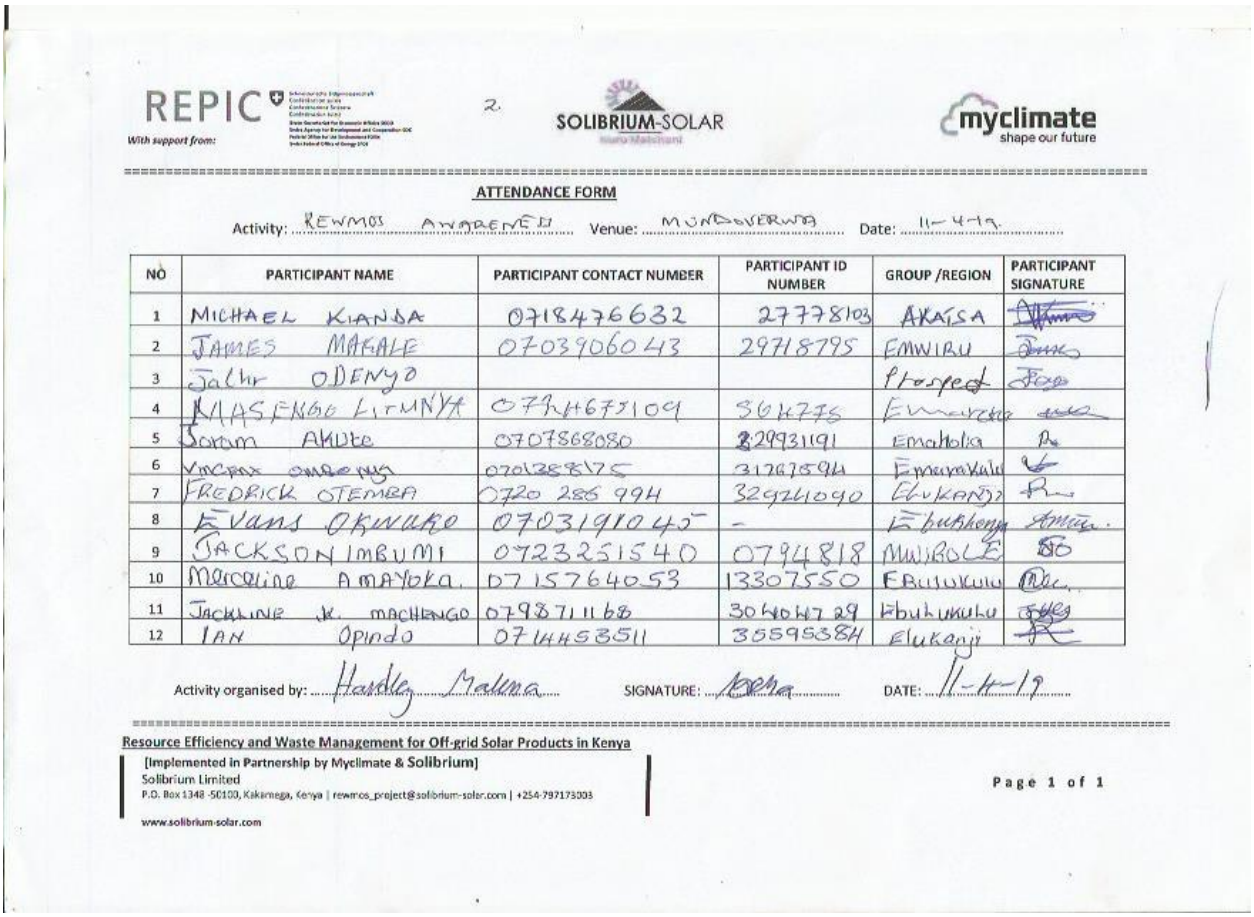

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ATTENDANCE FORM

Activity: REWMOS AWARENESS Venue: MUNDOVERWA Date: 11-4-19.

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	MICHAEL KIANDA	0718476632	27778103	AKAISA	
2	JAMES MAKALE	0703906043	29718795	EMWIRU	
3	Jaclir ODENYO			Ptospect	
4	MASENGO LITUNYA	0714671109	36477S	Emwirwa	
5	Soram AMUTE	0707868080	29931191	Emalhola	
6	[illegible]	0701358175	31767594	Emwirwa	
7	FREDRICK OTEMBA	0720 286 994	32924090	Elukanji	
8	EVANS OKWARO	07031910 45	-	Ebukhonya	
9	JACKSON IMBUMI	0723251540	0794818	MWIBOLE	
10	Marceline AMAYOKA.	07157640 53	13307550	Ebulukulu	
11	JACKLINE W. MACHENGO	0798711 68	30460729	Ebukhukulu	
12	IAN Opindo	0714453511	35595384	Elukanji	

Activity organised by: Hardley Malima SIGNATURE: DATE: 11-4-19

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4.

ATTENDANCE FORM

Activity: REWMOS AWARENESS Venue: MUNDEKERWA Date: 11.04.19

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	NECHESA MAUREEN	0795853017	34425564588	EMAHOLIA	
2	Christine Alube	0714434321	29011668	EMAHOLIA	
3	EVANS OKAALO	722297377	22281985	ELUKANJI	
4	Daniel Amukoyale	0791812537	22859589	Elukanji	
5	Morris Andere	0746149080	11737380	EMAHOLIA	
6	Sylvia Imunya	0790703284	24267557	Emaholia	
7	ELIZABETH MUKOYA	0704645766	26792652	EMULOLE	
8	WILLCOX OKAALO	0712098923	22898880	ELUKANJI	
9	Robin Mutheri	0715325596	29506954	Elukanji	
10	BONIFACE Imali	0726625964	33590052	REWMOS	
11	Hardley Malera	0711147935	31781023	REWMOS	
12	Bayo Eliud	0713 819090	25252163	Technician	

Activity organised by: Hardley Malera SIGNATURE: DATE: 11-4-19

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7.MAGO AWARENESS CREATION REPORT.

Date: 24th April 2019.

A group photo of all solar users and prospects who attended the 7th REWMOS Awareness creation.

The Awareness was attended by 90 solar users,10 prospect solar users, and 1 technician. The awareness proceeding was led by REWMOS Project Coordinator, Hardley Malema in Liaison with E waste Expert, Eric Guantai.

==========

Demonstration of solar product parts

Different types of Solar Home Systems and their components were displayed and Solibrium's' technical person explained to them what role each item plays. The components included; batteries, Panels, Bulbs, Cables/wires and a Television set.

The technician also explained the lifespan of each components as follows :(Batteries-5 years, Panels -25 years and bulbs – 30,000 working hours).

These components can be reused, refurbished, or recycled whenever they reach their end of life and therefore the products should not be thrown away, burn or left unattended to.

Best practices to enhance Efficiency, Extend the life span of Solar Home Systems.

The participants were how they were maintaining their kits. The responses were as follows:

- Putting the panels on their roofs.
- Keeping them far from children.

SHS users were given graphic best practices bronchure written in both English and Kiswahili.The technician then went through with each of the best practice as well as illustrating so as to ensure the users have a better understanding on the need to maintain and how to maintain their kits in order to extend the kits lifespan.

Expert Advice on best practices

Use

- Regularly clean solar panels and other components. For the solar panel, water with no detergent should be used with no detergent for effective charging.
- Install panels in well protected areas away from children and their preferred play areas.
- Always be careful when handling the components to avoid breaking as a result of their delicate nature.
- Always plug in recommended components to right usb or charging ports to avoid short circuiting of the components.
- Install solar panels at an angle that allows maximum exposure of sunlight especially at peak hours of sunlight around mid-day.
- Storage of the battery in a safe place away from children interference and fire sources.
- Contact qualified technicians for proper diagnosis,advice and repair of faulty components.
- Always ensure the battery is fully charged.
- Do not power faulty or multiple components.
- Always read the user manual and use the components designed for the system.
- For flooded batteries, periodically top up battery acid.

==========

Disposal

For end users

- Take obsolete solar components to designated collection points for proper recycling/disposal,or consult relevant authorities e.g NEMA or your seller for advice.
- Call REWMOS on 0797173003 for advice.
- Do not dispose the batteries on open land or latrines
- Do not burn the obsolete solar components.
- Call and return the products to the suppliers at the end of life.
- Read and keep all the documents issued at the date of purchase for advice on disposal practices.

Negative Impacts of E waste.

- Impact on the environment:immediate and direct impact of inappropriate recycling or disposal of end of life products will mean local contamination for example through harzadous materials used in batteries.
- Dumping electronics in a landfill creates a big problem for the environment since for example the batteries contain lithium ion that is toxic. The different toxic substances can also pollute water making it unsafe for drinking. Improper dumping of electronic waste affects the environment as a whole ad this includes all types of creatures. When the chemicals are released to the atmosphere, every living this is negatively impacted. This also includes the air and the soil, practically; anything that comes into contact with electronic waste is at risk.
- E waste contains materials that are toxic such as lead,mercury which are harmful to the environment and human health if improperly managed.The impacts on health can bring damage or implications to reproduction,liver,kidneys,blood,respiratory,heart and lungs.

Feedback summary from the participants on collection of obsolete components

- Incentives to be given to solar users who return the components.
- REWMOS to collect obsolete components from other solar companies.

Questions asked by participants about the REWMOS project

- Will Solibrium replace the obsolete components?
- T shirts to be given for awareness.

Lease Model

- Lease model was welcomed by the participants even though they insisted that they be clearly be told upon purchase.

Feedback summary from the participants

- A questionnaire was given to participants for feedback on the awareness. A total of 56 participants were interviewed.

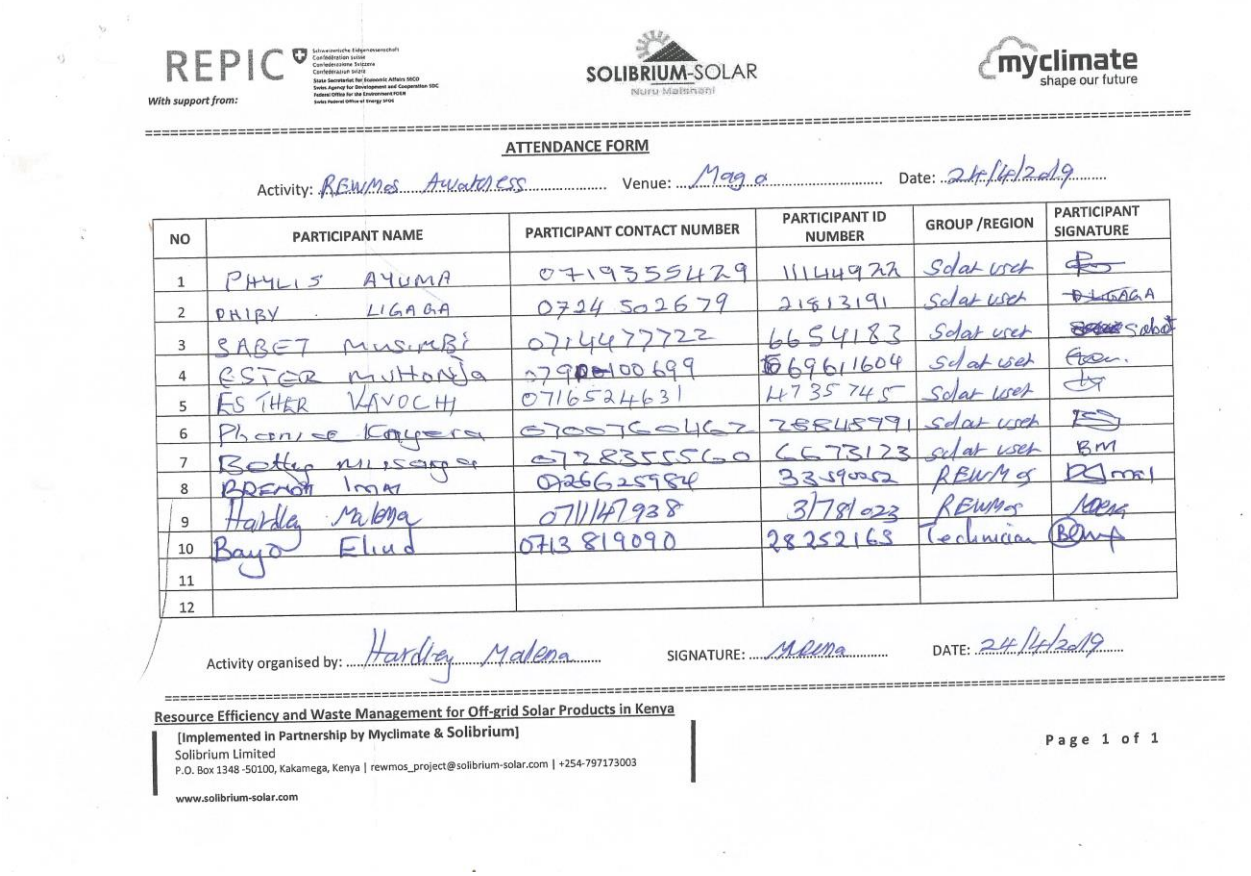
- Most of the respondents acknowledged that after the awareness, they now had an excellent level of understanding of not only E waste/Solar waste. Also, they acknowledged that they had learnt about REWMOS, how to use/maintain their components and proper disposal.

PICTORIAL




Figures above are pictures from the awareness creation.

Appendix 7: Training Attendance register



REPIC Schweizerische Eidgenossenschaft Confédération suisse Confederazione Svizzera Confederaziun svizra
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ATTENDANCE FORM

Activity: REWMS Awareness Venue: Maga Date: 24/4/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	PHYLIS AYUMA	0719355429	11144922	Solar user	
2	PHIBY LIGAGA	0724 502679	21613191	Solar user	
3	SABET MUSIMBI	0714477722	6654183	Solar user	
4	ESTER MUTHONJA	0790100699	69611604	solar user	
5	ESTHER VAVOCHI	0716524631	47357457	Solar user	
6	Phanice Kayera	0700760467	28545791	solar user	
7	Bethy Musanga	0728355560	26773123	solar user	BM
8	Brenda Iman	0726625984	33590052	REWMS	
9	Hardley Malena	0711147938	31781023	REWMS	
10	Bayo Eliud	0713819090	28252163	Technician	
11					
12					

Activity organised by: Hardley Malena SIGNATURE: Malena DATE: 24/4/2019

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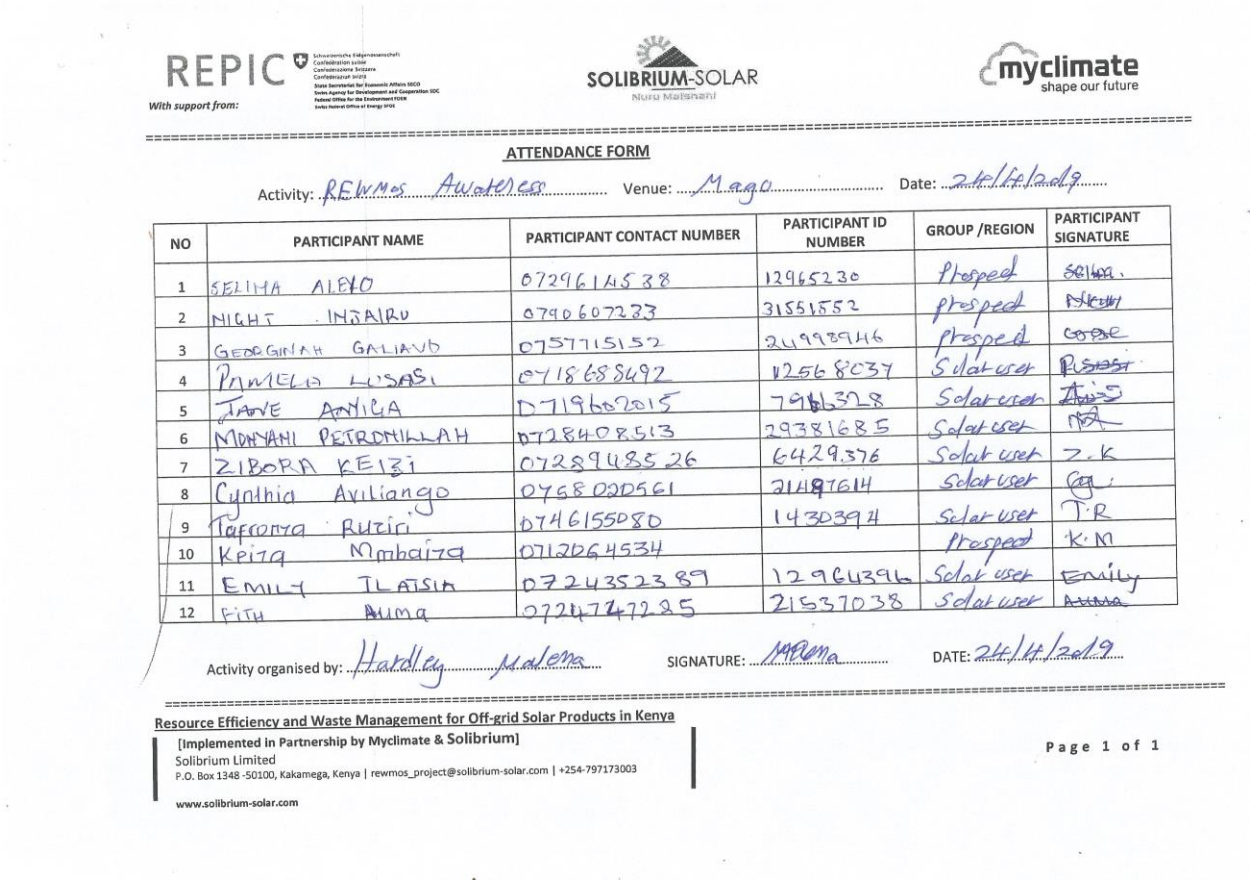

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ATTENDANCE FORM

Activity: REWMOS Awareness Venue: Mago Date: 24/11/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	SELINA ALEYO	0729614538	12965230	Prospect	Selina.
2	NIGHT INJAIRU	0790607233	31551552	prospect	
3	GEORGINAH GALIAVO	0757715152	24999146	prospect	
4	PAMELA LUSASI	0718688492	12568037	Solar user	
5	JANE ANYIGA	0719602015	7986378	Solar user	
6	MOHAMMED PETRONILLAH	0728408513	29381685	Solar user	
7	ZIBORA KEIJI	0729485526	6429376	Solar user	Z.K
8	Cynthia Aviliango	0758020561	21487614	Solar user	
9	Taffonya Ruziri	0746155080	14303974	Solar user	T.R
10	Keitq Mmbaiza	0712664534		Prospect	K.M
11	EMILY ILAISIA	0724352389	12964396	Solar user	Emily
12	FITH ALIMA	0724772285	21537038	Solar user	

Activity organised by: Hardley Malema SIGNATURE: DATE: 24/11/2019

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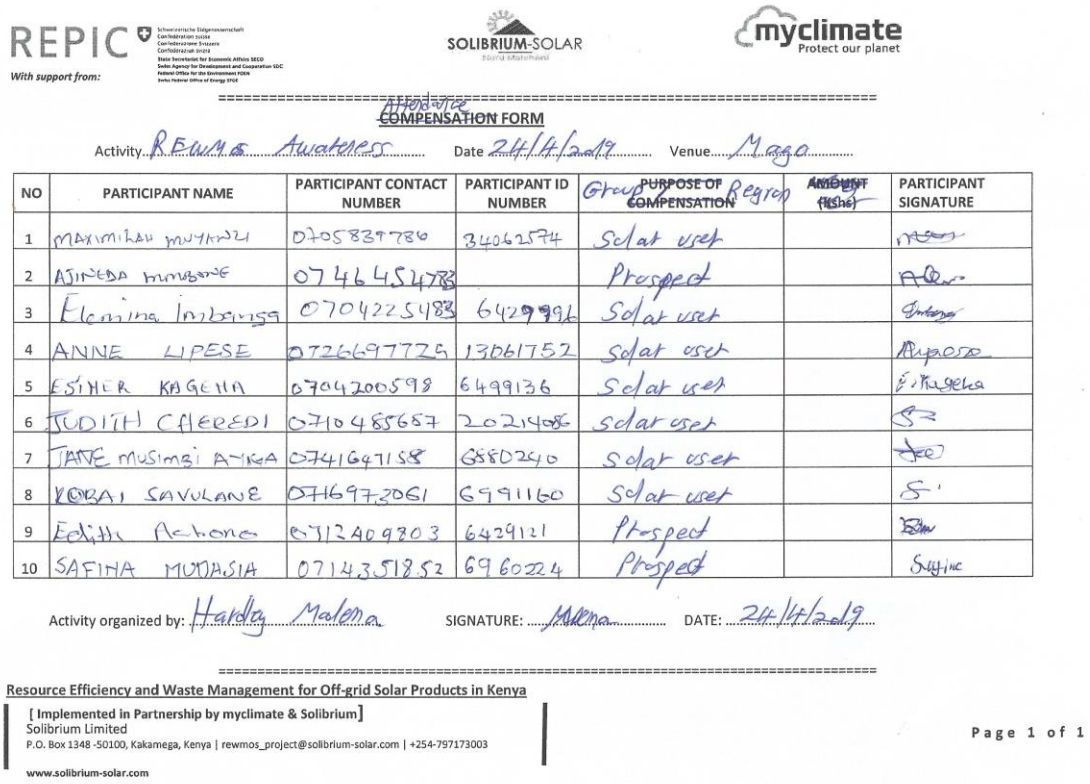

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~~COMPENSATION~~ Attendance FORM

Activity: Rewmos Awareness Date: 24/4/2019 Venue: Maaga

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	~~PURPOSE OF COMPENSATION~~ Group Region	~~AMOUNT (Kshs)~~	PARTICIPANT SIGNATURE
1	MAXIMILAH MUYANZI	0705839786	34062574	Solar user		
2	AJINEDA MUNGANGE	0746454783		Prospect		
3	Florence Imbisisi	0704225483	6429996	Solar user		
4	ANNE LIPESE	0726697725	13061752	Solar user		
5	ESTHER KAGENA	0704200598	6499136	Solar user		
6	JUDITH CHEREDI	0710485657	20214086	Solar user		
7	JANE MUSIMBI AYIKA	0741647158	6580240	Solar user		
8	KORAI SAVULANE	0716973061	6991160	Solar user		
9	Edith Achieng	0712409803	6429121	Prospect		
10	SAFINA MUMASIA	0714351852	6960224	Prospect		

Activity organized by: Hardy Malema SIGNATURE: Malema DATE: 24/4/2019

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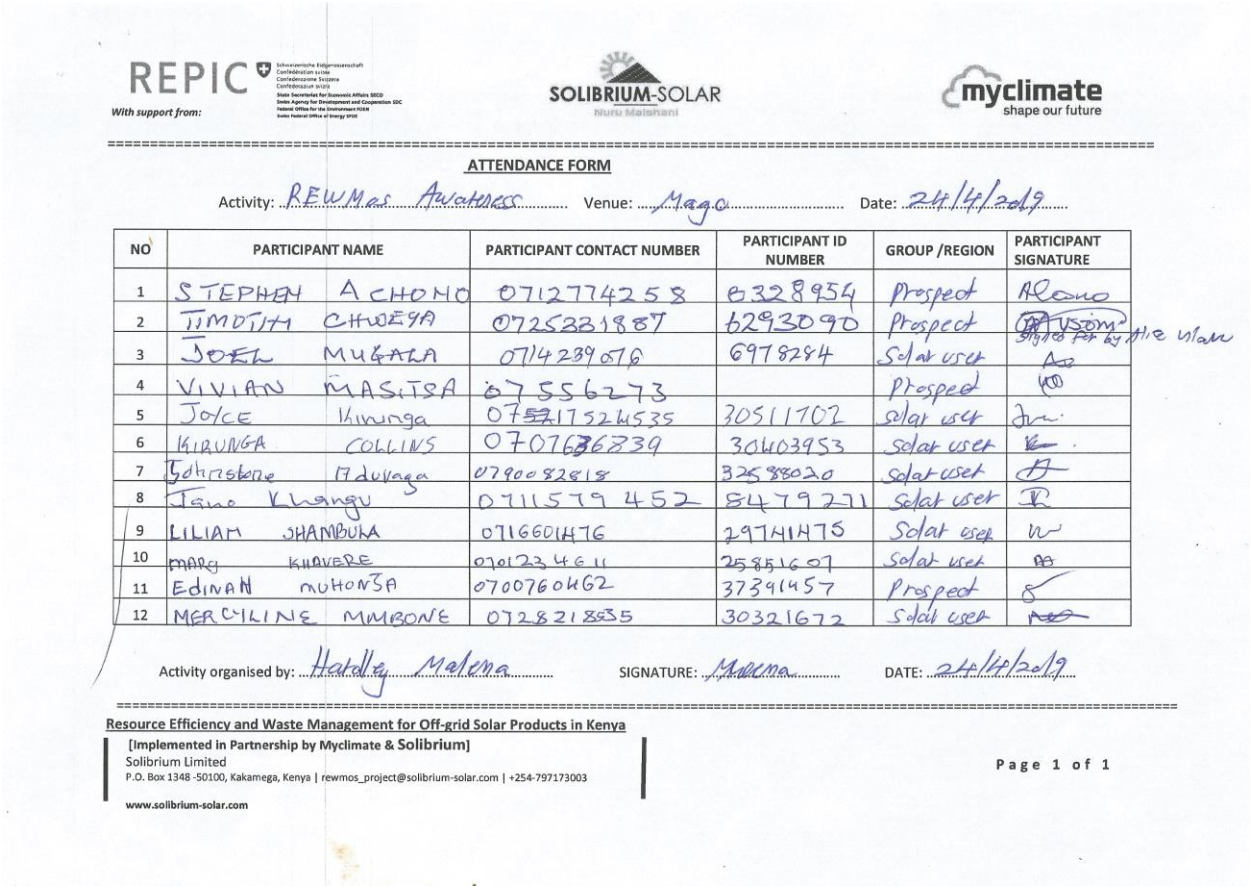

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Activity: REWMas Awareness Venue: Mago Date: 24/4/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	STEPHEN ACHONO	0712774258	03289954	Prospect	ACono
2	TIMOTHY CHWEYA	0725331887	62930990	Prospect	Usom Signed for by Alice Usam
3	JOEL MUGALA	0714239076	6978284	Solar user	
4	VIVIAN MASITSA	0755 6273		Prospect	
5	Joice Khwanga	0752175245 35	30511702	solar user	
6	KIRUNGA COLLINS	0707686739	30403953	Solar user	
7	Edwinstone Mdungaga	0790082818	32588020	Solar user	
8	Jane Khangu	0711579 452	84792 71	Solar user	
9	LILIAN JHAMBUKA	0716601476	29741475	Solar user	
10	MARY KHAVERE	0701234611	25851607	Solar user	
11	EDINAH MUHONJA	0700760462	37391457	Prospect	
12	MERCILINE MMBONE	0728218535	30321672	Solar user	

Activity organised by: Hadley Malena SIGNATURE: Malena DATE: 24/10/2019

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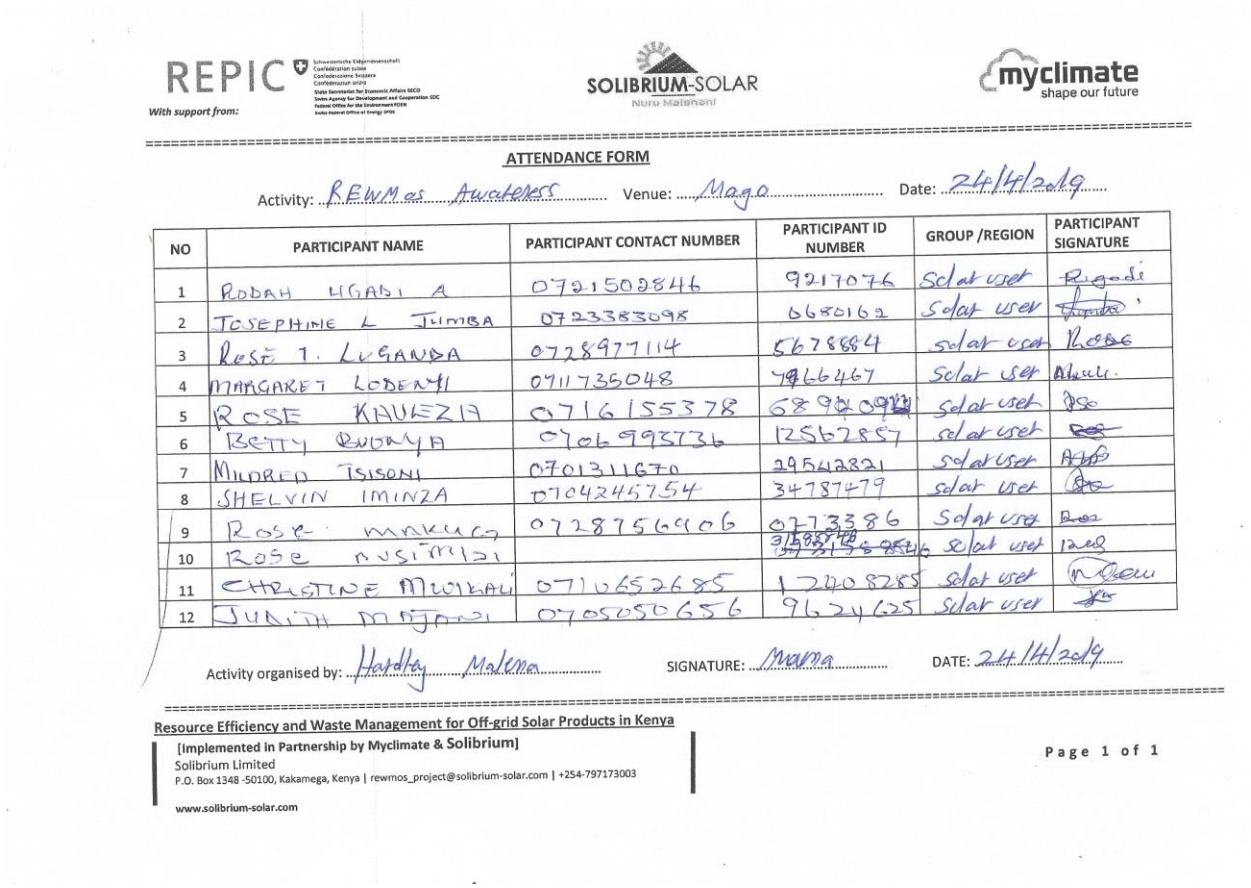

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Activity: REWMOS Awareness Venue: Mago Date: 24/4/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	RODAH LIGABI A	0721502846	9217076	Solar user	Rigadi
2	JOSEPHINE L JUMBA	0723383098	6680162	Solar user	
3	ROSE T. LUGANDA	0728977114	5678884	solar user	Rose
4	MARGARET LOBENYI	0711735048	7966467	Solar user	
5	ROSE KAUEZIA	0716155378	68908	solar user	
6	BETTY RUOMYA	0706993736	12562857	solar user	
7	MILDRED ISISONI	0701311670	29542321	Solar user	
8	SHELVIN IMINZA	0704245754	34787479	solar user	
9	ROSE MAKUCA	0728756906	0773386	Solar user	
10	ROSE AUSIMIZI		31	solar user	12
11	CHRISTINE MUOKALI	0710652685	12408285	solar user	
12	JUDITH MIJA	0705050656	9624625	Solar user	

Activity organised by: Hardly Malena SIGNATURE: Marma DATE: 24/4/2019

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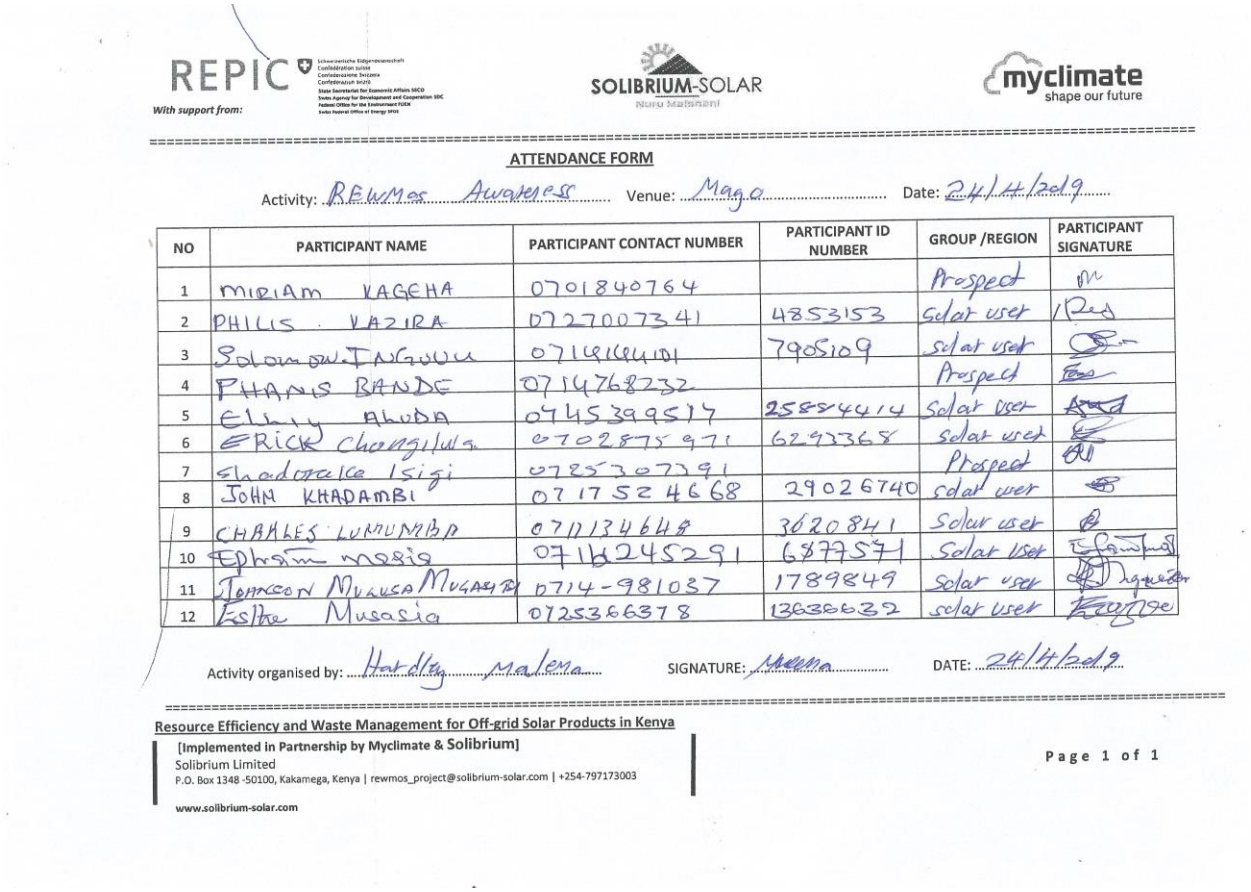

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Activity: REWMOS Awareness Venue: Maga Date: 24/4/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	MIRIAM KAGEHA	0701840764		Prospect	
2	PHILIS KAZIRA	0722700734	4853153	Solar user	
3	SOLOMON INGUVU	0714161841	7905109	solar user	
4	PHANIS BANDE	0714768232		Prospect	
5	ELIJAH AKUDA	0745399517	25554414	Solar user	
6	ERICK Changilwa	0702875971	6293368	solar user	
7	Shadrack Isigi	0725307291		Prospect	
8	JOHN KHADAMBI	0717524668	29026740	solar user	
9	CHARLES LUMUMBA	0711346448	3620841	Solar user	
10	Ephraim Masia	0716245291	6877571	Solar user	
11	Jonnson Musasa Mugambi	0714-981037	1789849	solar user	
12	Esther Musasia	0725366378	13636632	solar user	

Activity organised by: Hardley Malema SIGNATURE: DATE: 24/4/2019

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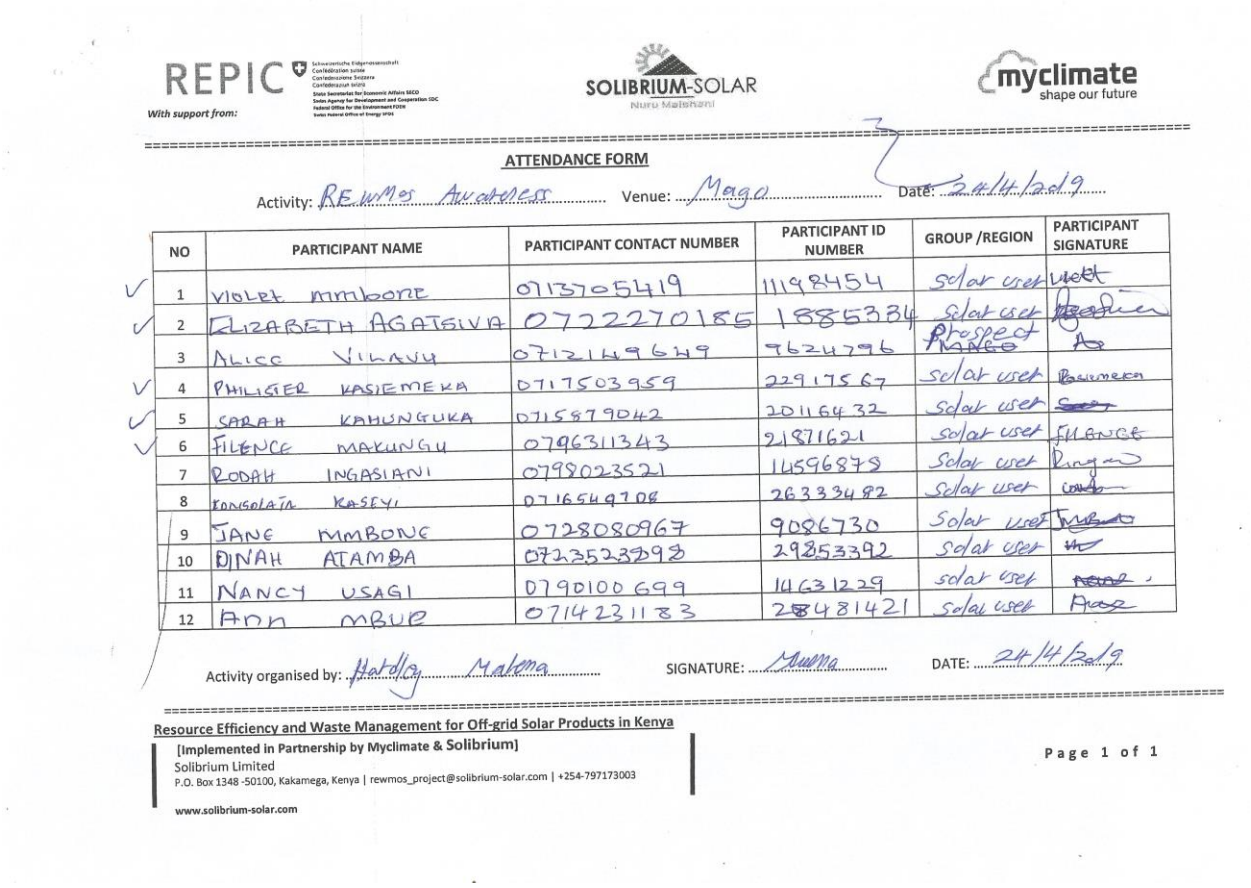

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Activity: REWMOS Awareness Venue: Maga Date: 24/4/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	VIOLET MMBONE	0713705419	11198454	solar user	
2	ELIZABETH AGATSIVA	0722270185	18853384	solar user	
3	ALICE VILAVU	0712149649	9624796	Prospect MAKES	
4	PHILIGER KASIEMEKA	0717503959	22917567	solar user	
5	SARAH KAHUNGUKA	0715879042	20116432	solar user	
6	FILENCE MAKUNGU	0796311343	21871621	solar user	FILENCE
7	RODAH INGASIANI	0798023521	14596879	Solar user	
8	CONSOLATA KASEYI	0716549708	26333482	Solar user	
9	JANE MMBONE	0728080967	9086730	Solar user	
10	DINAH ATAMBA	0723523293	29853392	solar user	
11	NANCY USAGI	0790100699	14631229	solar user	
12	ANN MBUP	0714231183	28481421	Solar user	

Activity organised by: Hadija Malema SIGNATURE: Muema DATE: 24/4/2019

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8.IMBALE AWARENESS CREATION

Date : 25th April 2019.

A group photo of all solar users and prospects who attended the 8th REWMOS Awareness creation.

The Awareness was attended by 32 solar users,6 prospect solar users, and 1 technician. The awareness proceeding was led by REWMOS Project Coordinator, Hardley Malema in Liaison with E waste Expert, Eric Guantai.

Demonstration of solar product parts

Different types of Solar Home Systems and their components were displayed and Solibrium's' technical person explained to them what role each item plays. The components included; batteries, Panels, Bulbs, Cables/wires and a Television set.

The technician also explained the lifespan of each components as follows :(Batteries-5 years, Panels -25 years and bulbs – 30,000 working hours).

These components can be recycled or repurposed once they reach their end of life.

What is E waste?

E-waste refers to electronic products nearing the end of their "useful life", for example, solar components, computers and televisions. Many of these products can be reused, refurbished, or recycled.

What should be done with E waste?

Reduce, reuse, and recycle. Reduce your generation of e-waste through smart procurement and good maintenance. Reuse still-functioning electronic equipment by donating or selling it to someone. Recycle those components that cannot be repaired. Most electronic devices contain a variety of materials, including metals that can be recycled.

Best practices to enhance Efficiency, Extend the life span of Solar Home Systems.

All the participants were asked if they were aware of any good practices rather how they were maintaining their kits at the moment. Most of them said they were doing the following:

- Cleaning their components.
- Placing the panel on the roof.
- Not placing the panel directly on the iron sheets.

All the SHS users were given graphic best practices bronchure written in both English and Kiswahili. The technician then went through with each of the best practice as well as illustrating so as to ensure the users have a better understanding on the need to maintain and how to maintain their kits in order to extend the kits lifespan.

Expert Advice on best practices

Use

- Regularly clean solar panels and other components.For the solar panel,water with no detergent should be used with no detergent for effective charging.
- Install panels in well protected areas away from children and their preferred play areas.

- Always be careful when handling the components to avoid breaking as a result of their delicate nature.
- Always plug in recommended components to right usb or charging ports to avoid short circuiting of the components.
- Install solar panels at an angle that allows maximum exposure of sunlight especially at peak hours of sunlight around mid-day.
- Storage of the battery in a safe place away from children interference and fire sources.
- Contact qualified technicians for proper diagnosis,advice and repair of faulty components.
- Always ensure the battery is fully charged.
- Do not power faulty or multiple components.
- Always read the user manual and use the components designed for the system.
- For flooded batteries, periodically top up battery acid.

Disposal

For end users

- Take obsolete solar components to designated collection points for proper recycling/disposal,or consult relevant authorities e.g NEMA or your seller for advice.
- Call REWMOS on 0797173003 for advice.
- Do not dispose the batteries on open land or latrines
- Do not burn the obsolete solar components.
- Call and return the products to the suppliers at the end of life.
- Read and keep all the documents issued at the date of purchase for advice on disposal practices.

Negative Impacts of E waste.

- Impact on the environment: immediate and direct impact of inappropriate recycling or disposal of end of life products will mean local contamination for example through harzadous materials used in batteries.
- Dumping electronics in a landfill creates a big problem for the environment since for example the batteries contain lithium ion that is toxic. The different toxic substances can also pollute water making it unsafe for drinking. Improper dumping of electronic waste affects the environment as a whole ad this includes all types of creatures. When the chemicals are released to the atmosphere, every living this is negatively impacted. This also includes the air and the soil, practically; anything that comes into contact with electronic waste is at risk.
- E waste contains materials that are toxic such as lead, mercury which are harmful to the environment and human health if improperly managed. The impacts on health can bring damage or implications to reproduction, liver, kidneys, blood, respiratory, heart and lungs.

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Feedback summary from the participants on collection of obsolete components

- Some solar users would want to be REWMOS agents where they collect obsolete solar components and deliver to REWMOS at a fee.
- Incentives to be given to solar users who return the components.
- Partnerships to be done with local technicians.
- Every solar component to be brought including bulbs.

Lease Model

- Lease model was welcomed by the participants.

Questions asked about the REWMOS project.

- For the recycled components,how would someone differentiate from the original one?
- Will Solibrium set up collection points?
- How can old the women/men be incorporated in the project?

PICTORIAL




Figures above shows explanation of the best practices and interactive sessions.

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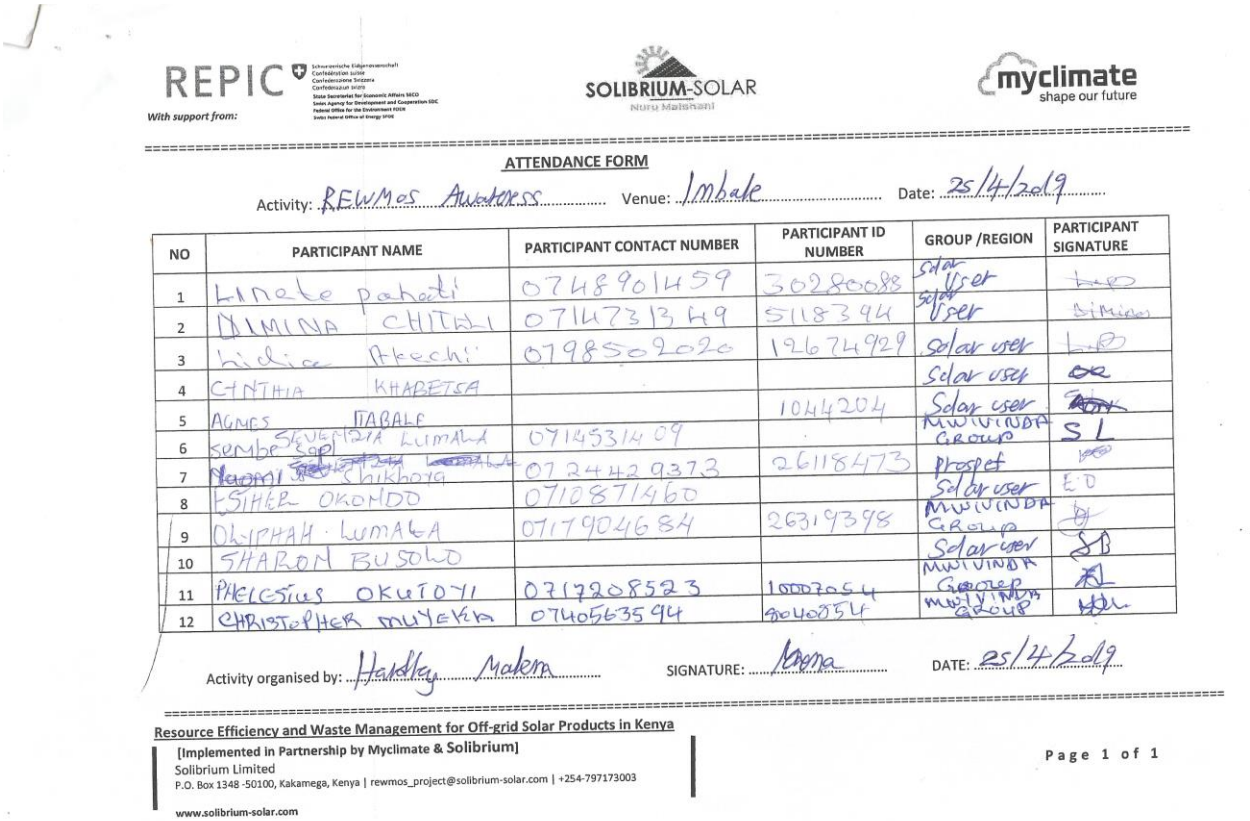
Appendix 8



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ATTENDANCE FORM

Activity: REWMOS Awareness Venue: Imbale Date: 25/4/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	Linate pakati	0748901459	30280088	Solar User	
2	DIMINA CHITWI	0714731349	5118344	Solar User	
3	Lidia Akechi	0798502020	12674929	Solar user	
4	CYNTHIA KHABETSA			Solar user	
5	AGNES ITABALE		1044204	Solar user	
6	SUMBE SAPI SYLVESTER LUMALA	0714531409		MWIVINDA Group	S L
7	Naomi Shikhoya	0724429373	26118473	Prospect	
8	ESTHER OKOMDO	0710871460		Solar user	E O
9	OLYPHAH LUMAGA	0717904684	26319398	MWIVINDA GROUP	
10	SHARON BUSOLO			Solar user	
11	PHELESTUS OKUTOYI	0717208523	10007054	MWIVINDA Group	
12	CHRISTOPHER MUYEKHA	0740563594	30407554	MWIVINDA GROUP	

Activity organised by: Hartley Makena SIGNATURE: DATE: 25/4/2019

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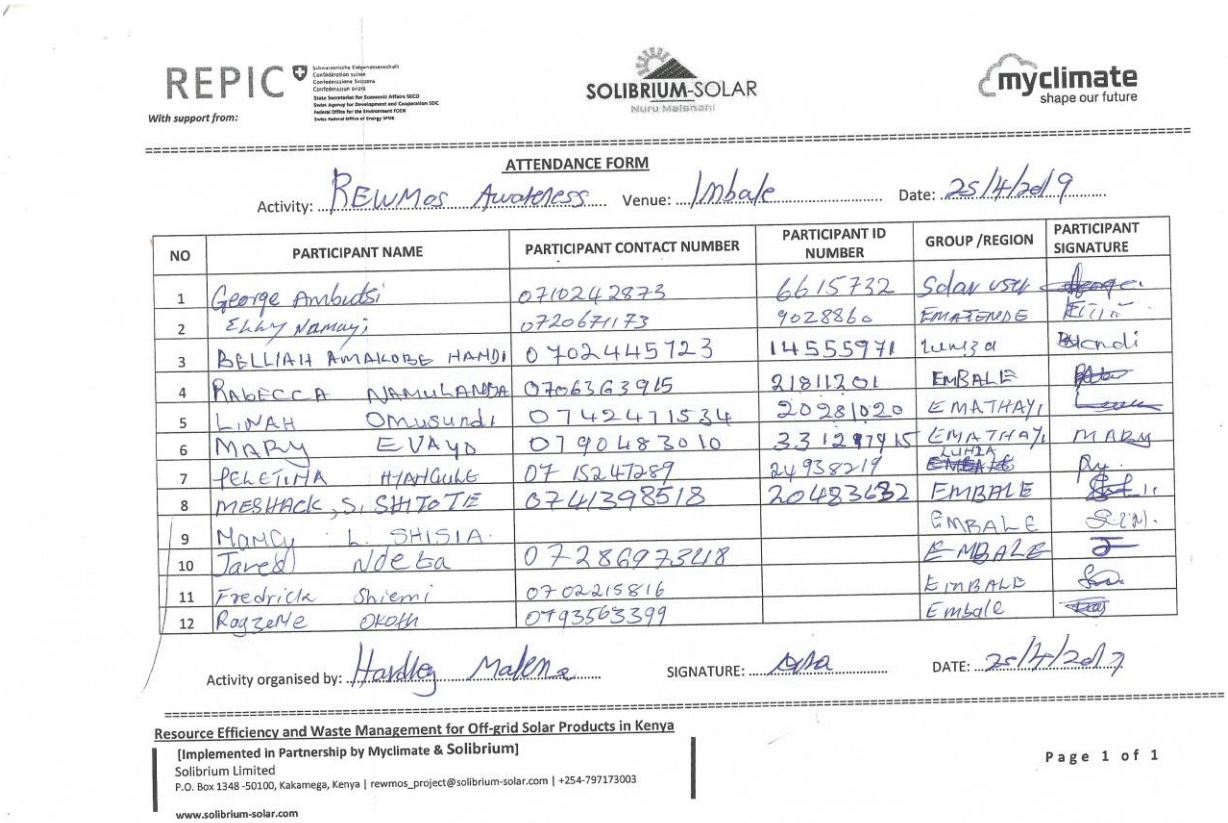

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Activity: REWMOS Awareness Venue: Imbale Date: 25/4/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	George Ambudsi	0710242873	6615732	Solar USU	
2	Elly Namayi	0720671173	9028860	EMATONDE	
3	BELLIAH AMALOBE HANDI	0702445723	14555971	LUHYA	
4	REBECCA NAMULANDA	0706363965	21811201	EMBALE	
5	LINAH OMUSUNDI	0742471534	20281020	EMATHAYI	
6	MARY EVAYO	0790483010	33129715	EMATHAYI	MARY
7	PELETINA HANGULE	07 15247289	24938219	LUHYA EMBALE	
8	MESHACK, S. SHITOTE	0741398518	20483682	EMBALE	
9	NANCY L. SHISIA			EMBALE	
10	Javed Ndeba	0728697328		EMBALE	
11	Fredrick Shiemi	0702215816		EMBALE	
12	Rozene OKOTH	0793563399		Embale	

Activity organised by: Handley Malenya SIGNATURE: DMA DATE: 25/4/2019

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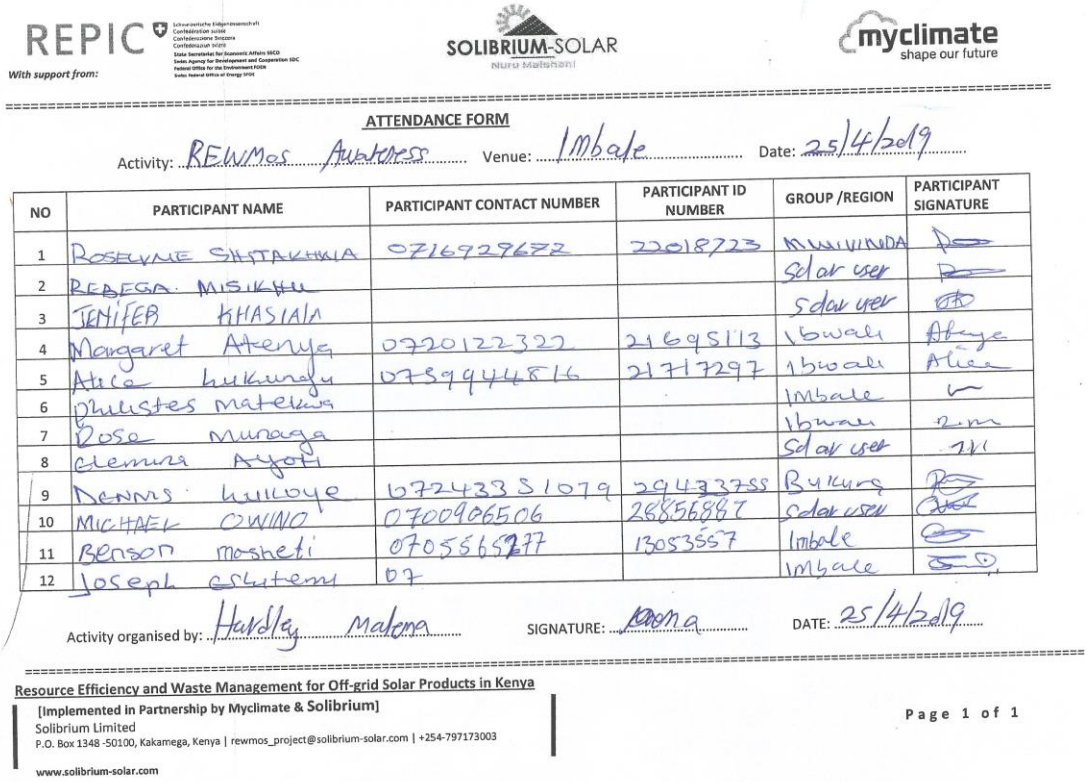

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Activity: REWMos Awareness Venue: Imbale Date: 25/4/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	ROSELYNE SHITAKHALA	0716929672	22018723	MWIKHUNDA	
2	REBEGA MISIKHU			Solar user	
3	JENIFER KHASIALA			Solar user	
4	Margaret Ateniya	0720122322	21695113	Ibwali	
5	Alice Lukunaly	0759944816	21717297	Ibwali	
6	Philisters Matekwa			Imbale	
7	Rose Munaga			Ibwali	
8	Clemma Ayoti			Solar user	
9	Dennis Lukoye	0724335079	29433755	Bukuna	
10	MICHAEL OWINO	0700966506	26856887	Solar user	
11	Benson Mosheti	0705565777	13053557	Imbale	
12	Joseph Eshitemi	07		Imbale	

Activity organised by: Hurdley Malema SIGNATURE: DATE: 25/4/2019

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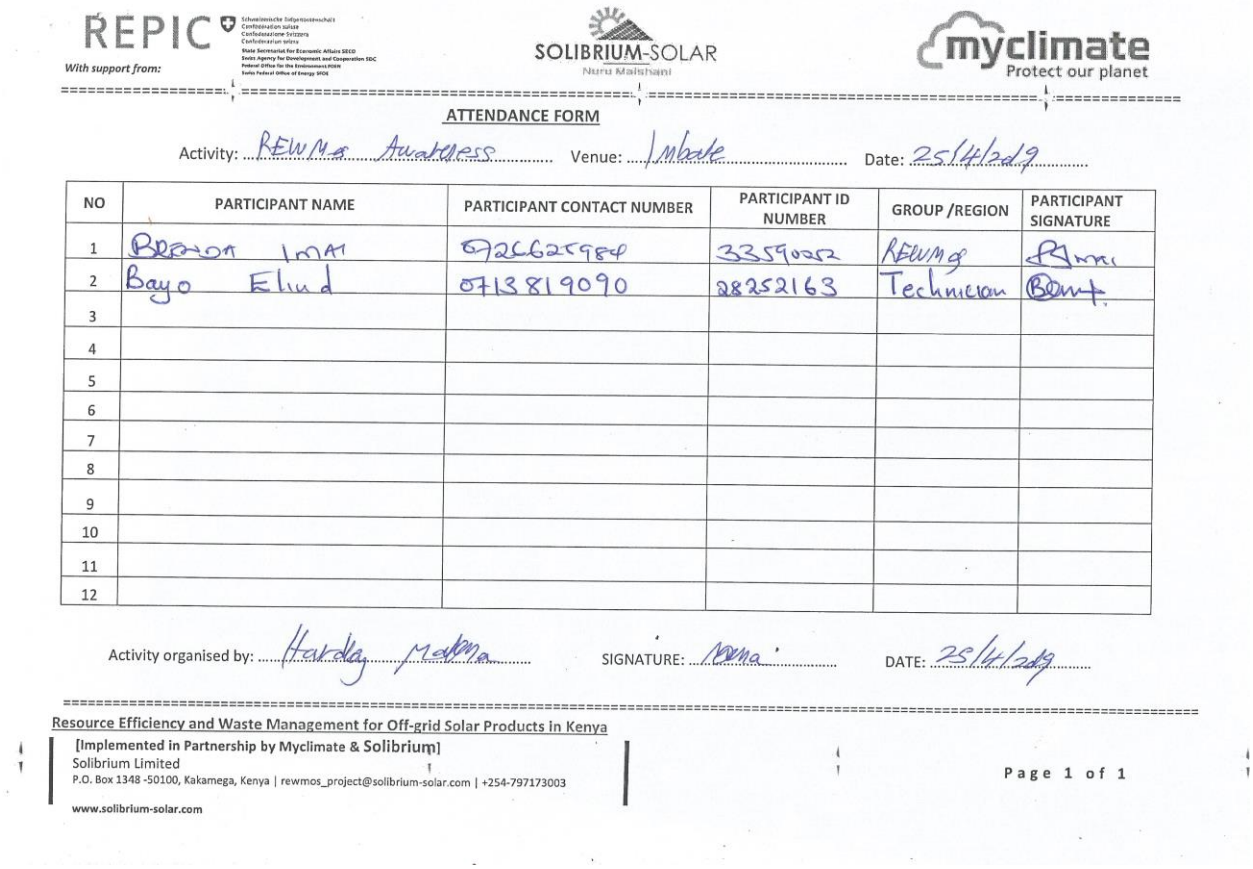

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ATTENDANCE FORM

Activity: REWMs Awareness Venue: Imbale Date: 25/4/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	[illegible] IMAI	0726625984	33590252	REWMs	
2	Bayo Elud	0713819090	28252163	Technician	
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

Activity organised by: Hardley Madima SIGNATURE: DATE: 25/4/2019

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9. MALAVA AWARENESS CREATION REPORT.

Date: 26th April 2019

A group photo of all solar users and prospects who attended the 9th REWMOS Awareness creation.

The Awareness was attended by 30 solar users and 6 prospect solar users. The awareness proceeding was led by REWMOS Project Coordinator, Hardley Malema.

==========

Demonstration of solar product parts

Different types of Solar Home Systems and their components were displayed and Solibrium's' technical person explained to them what role each item plays. The components included; batteries, Panels, Bulbs, Cables/wires and a Television set.

The technician also explained the lifespan of each components as follows :(Batteries-5 years, Panels -25 years and bulbs – 30,000 working hours).

These components can be recycled or repurposed once they reach their end of life.

What is E waste?

E-waste refers to electronic products nearing the end of their "useful life", for example, solar components, computers and televisions. Many of these products can be reused, refurbished, or recycled.

What should be done with E waste?

Reduce, reuse, and recycle. Reduce your generation of e-waste through smart procurement and good maintenance. Reuse still-functioning electronic equipment by donating or selling it to someone. Recycle those components that cannot be repaired. Most electronic devices contain a variety of materials, including metals that can be recycled.

Best practices to enhance Efficiency, Extend the life span of Solar Home Systems.

All the participants were asked if they were aware of any good practices rather how they were maintaining their kits at the moment. Most of them said they were doing the following:

- Cleaning their components.
- Placing the panel on the roof.

All the SHS users were given graphic best practices bronchure written in both English and Kiswahili.The technician then went through with each of the best practice as well as illustrating so as to ensure the users have a better understanding on the need to maintain and how to maintain their kits in order to extend the kits lifespan.

Expert Advice on best practices

Use

- Regularly clean solar panels and other components.For the solar panel,water with no detergent should be used with no detergent for effective charging.

==========

- Install panels in well protected areas away from children and their preferred play areas.
- Always be careful when handling the components to avoid breaking as a result of their delicate nature.
- Always plug in recommended components to right usb or charging ports to avoid short circuiting of the components.
- Install solar panels at an angle that allows maximum exposure of sunlight especially at peak hours of sunlight around mid-day.
- Storage of the battery in a safe place away from children interference and fire sources.
- Contact qualified technicians for proper diagnosis,advice and repair of faulty components.
- Always ensure the battery is fully charged.
- Do not power faulty or multiple components.
- Always read the user manual and use the components designed for the system.
- For flooded batteries, periodically top up battery acid.

Disposal

For end users

- Take obsolete solar components to designated collection points for proper recycling/disposal,or consult relevant authorities e.g NEMA or your seller for advice.
- Call REWMOS on 0797173003 for advice.
- Do not dispose the batteries on open land or latrines
- Do not burn the obsolete solar components.
- Call and return the products to the suppliers at the end of life.
- Read and keep all the documents issued at the date of purchase for advice on disposal practices.

Negative Impacts of E waste.

- Impact on the environment:immediate and direct impact of inappropriate recycling or disposal of end of life products will mean local contamination for example through harzadous materials used in batteries.
- Dumping electronics in a landfill creates a big problem for the environment since for example the batteries contain lithium ion that is toxic. The different toxic substances can also pollute water making it unsafe for drinking. Improper dumping of electronic waste affects the environment as a whole ad this includes all types of creatures. When the chemicals are released to the atmosphere, every living this is negatively impacted. This also includes the air and the soil, practically; anything that comes into contact with electronic waste is at risk.
- E waste contains materials that are toxic such as lead, mercury which are harmful to the environment and human health if improperly managed. The impacts on health can bring damage or implications to reproduction, liver, kidneys, blood, respiratory, heart and lungs.

Feedback summary from the participants on collection of obsolete components

- Some solar users would want to be REWMOS agents where they collect obsolete solar components and deliver to REWMOS at a fee.
- Incentives to be given to solar users who return the component,

Lease Model

- Lease model was welcomed by the participants and it should be incorporated in PAYG.

Questions asked about the REWMOS project.

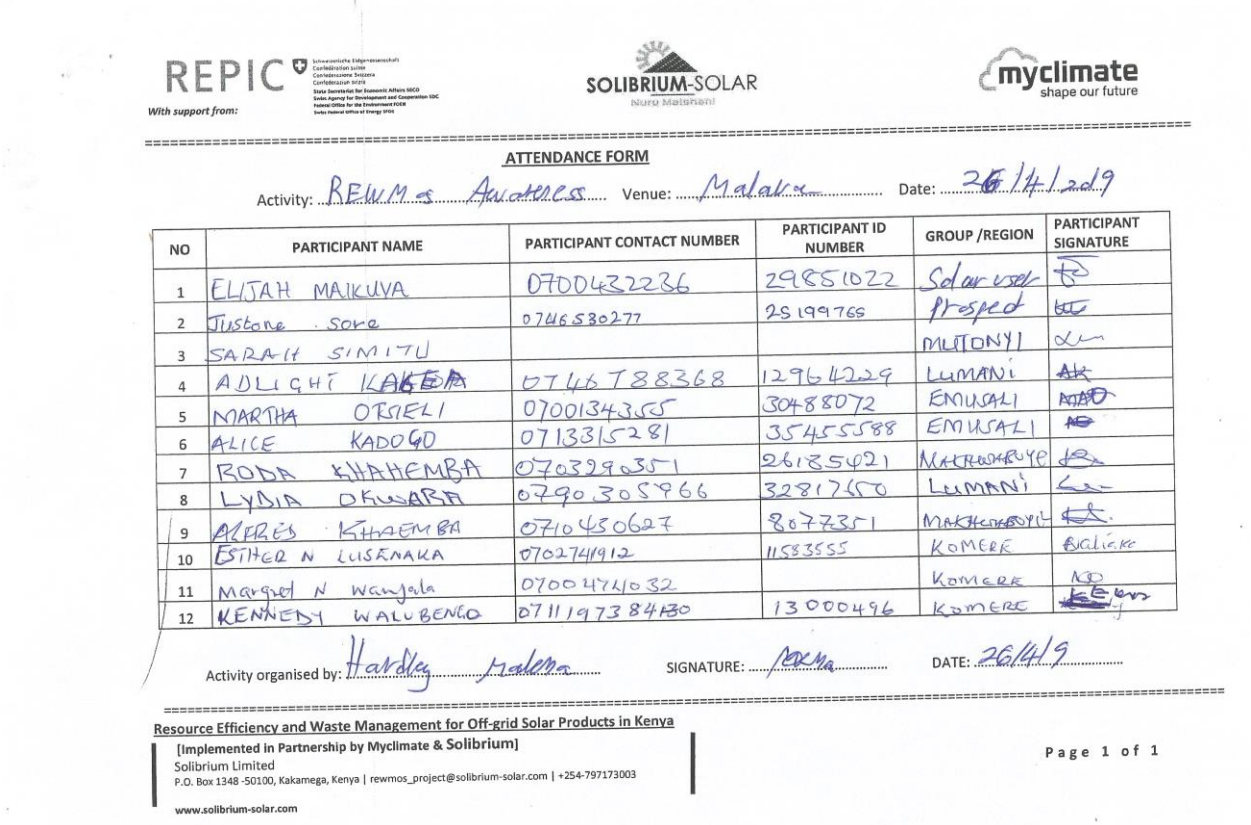
- Will Solibrium set up collection points?
- How can the bulbs and batteries life span be extended?

PICTORIAL




Figures above shows explanation of the best practices and interactive sessions.

Appendix 9: Training Attendance register



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ATTENDANCE FORM

Activity: REWMOS Awareness Venue: Malaba Date: 26/4/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	ELIJAH MAIKUVA	0700432236	29851022	Solar user	
2	Justone Sore	0746580277	25199765	Prospect	
3	SARAH SIMITU			MUTONYI	
4	ADLIGHT KAKEMA	0746788368	12964229	LUMANI	
5	MARTHA ORSIELI	0700134355	30488072	EMUSALI	
6	ALICE KADOGO	0713315281	35455588	EMUSALI	
7	RODA KHAEMBA	0703290351	26185921	MAKHUKHUYE	
8	LYDIA OKUMARA	0790.305966	32817650	LUMANI	
9	ALFRES KHAEMBA	0710430627	8077351	MAKHUKHUYE	
10	ESTHER N LUSENAKA	0702741912	11583555	KOMERE	
11	Margret N Wanyala	0700474032		KOMERE	
12	KENNEDY WALUBENGO	0711973840	13000496	KOMERE	

Activity organised by: Hardley Malema SIGNATURE: DATE: 26/4/9

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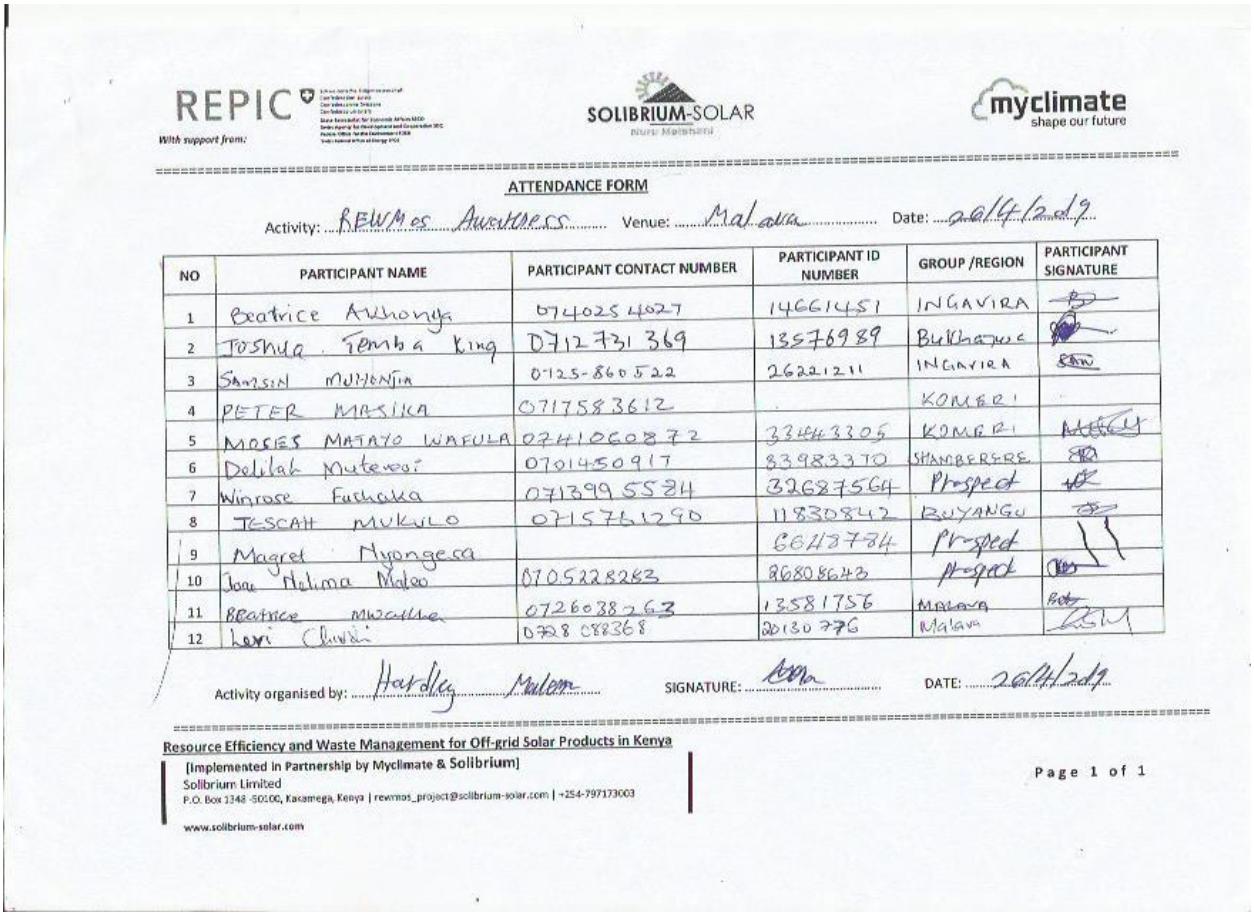

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ATTENDANCE FORM

Activity: REWMOS Awareness Venue: Malava Date: 26/4/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	Beatrice Awhonya	0740254027	14661451	INGAVIRA	
2	Joshua Temba King	0712731369	13576989	Bukhayo c	
3	Samsin Muhonja	0725-860522	26221211	INGAVIRA	
4	PETER MASIKA	0717583612		KOMERI	
5	MOSES MATAYO WAFULA	0741060872	33443305	KOMERI	
6	Delilah Muteveti	0701450917	83983370	SHANBERERE	
7	Winrose Fucheka	0713995534	32687564	Prospect	
8	TESCAH MUKULO	0715761290	11830842	BUYANGU	
9	Magret Nyongesa		6643784	Prospect	
10	Joan Malima Mateo	0705228283	86808643	Prospect	
11	Beatrice Mwaliko	0726038263	13581756	Malava	
12	Levi Chuvi	0728 088368	20130776	Malava	

Activity organised by: Hardley Malom SIGNATURE: DATE: 26/4/2019

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ATTENDANCE FORM

Activity: REWMOS Awareness Venue: Malava Date: 26/4/2019

NO	PARTICIPANT NAME	PARTICIPANT CONTACT NUMBER	PARTICIPANT ID NUMBER	GROUP /REGION	PARTICIPANT SIGNATURE
1	Jafred Lumbasi	0717027311	9733028	Mutingorgo	
2	Andrew. Mungai	0724 523261	11303247	Malava	
3	Tesan. H. WAMALWA	0729244993	21633734	Makhukhuni	
4	Naomi .MH. OAVED	0743113156	26192983	Makhukhuni	
5	Hoire Nelhes Mwathe	0716793328	13344977	Kambi'	
6	Joseph Sikola	0726065208	20197004	MALAVA	
7	Simon Wanjama	0718509421	..	KOMERE	
8	Robin Mutehei	0725325546	29586957	Technician	
9	Reuben Imm	0726625984	23590052	REWMOS	
10	Hardley Malena	0711147928	31781023	REWMOS	
11	Bayo Elind	0713819090	28252163	Technician	
12					

Activity organised by: Hardley Malena SIGNATURE: DATE: 26/4/2019

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10. RADIO TALK SHOW ON LUBAO FM.

DATE:10TH May 2019.

- The talk show was hosted by Irene Nasimiyu (Lubao fm), Hardley Malema (REWMOS) and Eliud Bayo (REMWOS).
- Its estimated over 2000 listeners had tuned in.

About Solibrium.

Solibrium, located in Kakamega is a distributor of Solar Home systems. The payment model is both rent-to-own (PAYG) as well as direct cash sales and installations. Clients are offered bespoke options depending on their needs and budget.

The technician explained different types of Solar Home Systems and their prices both on cash and PAY AS YOU GO model.

The technician also explained the lifespan of each components as follows :(Batteries-5 years, Panels -25 years and bulbs – 30,000 working hours).

These components can be recycled or repurposed once they reach their end of life.

About REWMOS.

REWMOS is a project being implemented by Solibrium in partnership with Swiss organizations REPIC and Myclimate. These organizations are dedicated to reducing the negative environmental impacts of solar home systems (SHS), by introducing an economically viable business model for electrical waste management and recycling of SHS component.

Best practices to enhance Efficiency, Extend the life span of Solar Home Systems.

Expert Advice on best practices

Use

- Regularly clean solar panels and other components.For the solar panel,water with no detergent should be used with no detergent for effective charging.
- Install panels in well protected areas away from children and their preferred play areas.
- Always be careful when handling the components to avoid breaking as a result of their delicate nature.
- Always plug in recommended components to right usb or charging ports to avoid short circuiting of the components.
- Install solar panels at an angle that allows maximum exposure of sunlight especially at peak hours of sunlight around mid-day.
- Storage of the battery in a safe place away from children interference and fire sources.
- Contact qualified technicians for proper diagnosis,advice and repair of faulty components.

==========

- Always ensure the battery is fully charged.
- Do not power faulty or multiple components.
- Always read the user manual and use the components designed for the system.
- For flooded batteries, periodically top up battery acid.

Disposal

For end users

- Take obsolete solar components to designated collection points for proper recycling/disposal,or consult relevant authorities e.g NEMA or your seller for advice.
- Call REWMOS on 0797173003 for advice.
- Do not dispose the batteries on open land or latrines
- Do not burn the obsolete solar components.
- Call and return the products to the suppliers at the end of life.
- Read and keep all the documents issued at the date of purchase for advice on disposal practices.

Negative Impacts of E waste.

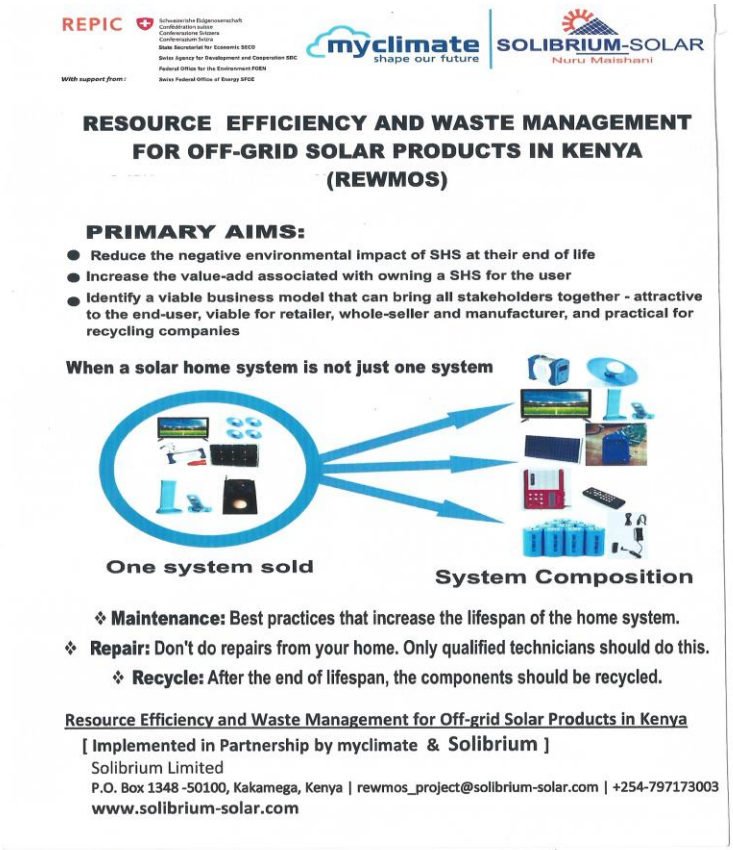
- Impact on the environment:immediate and direct impact of inappropriate recycling or disposal of end of life products will mean local contamination for example through harzadous materials used in batteries.

Questions asked about the REWMOS project.

- Will Solibrium switch off lights of once users have completed payments?
- How is Solibrium technologically advanced than the other solar companies?
- Where do Solibrium see itself in the next 3 years?
- How is Solibrium affecting climate change?
- How can the batteries life span be extended?
- Will Solibrium give replacements on obsolete components that are returned?

PICTORIAL

Appendix 10: REWMOS Bronchure.



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RESOURCE EFFICIENCY AND WASTE MANAGEMENT FOR OFF-GRID SOLAR PRODUCTS IN KENYA (REWMOS)

PRIMARY AIMS:

- Reduce the negative environmental impact of SHS at their end of life
- Increase the value-add associated with owning a SHS for the user
- Identify a viable business model that can bring all stakeholders together - attractive to the end-user, viable for retailer, whole-seller and manufacturer, and practical for recycling companies

When a solar home system is not just one system

One system sold

System Composition

- **Maintenance:** Best practices that increase the lifespan of the home system.
- **Repair:** Don't do repairs from your home. Only qualified technicians should do this.
- **Recycle:** After the end of lifespan, the components should be recycled.

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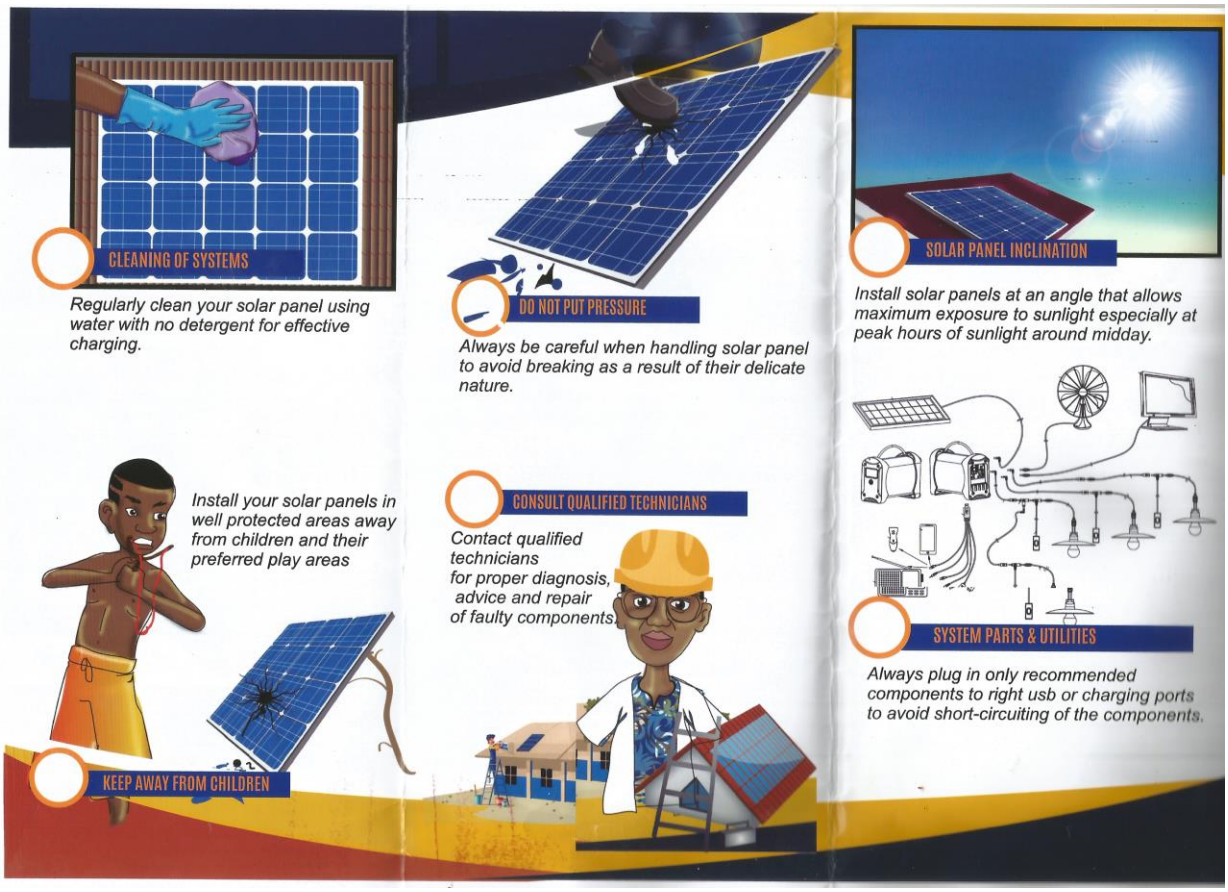
24"TV PACK
SIMPLICITY 6 LIGHTS
32"TV PACK
19"TV PACK
BARBER KIT
CHARGING KIT
M600X_KEYP
M400X_KEYP
READING LAMP (I 190)
FISHING LAMP
SPEAKER
CUSTOMIZED SOLAR SYSTEM
To get the solar home lighting system Contact us on :0724 869 325 | 0796 738 469

Appendix 11: Best practices graphic bronchure – English Version.


CLEANING OF SYSTEMS
Regularly clean your solar panel using water with no detergent for effective charging.
DO NOT PUT PRESSURE
Always be careful when handling solar panel to avoid breaking as a result of their delicate nature.
SOLAR PANEL INCLINATION
Install solar panels at an angle that allows maximum exposure to sunlight especially at peak hours of sunlight around midday.
Install your solar panels in well protected areas away from children and their preferred play areas
KEEP AWAY FROM CHILDREN
CONSULT QUALIFIED TECHNICIANS
Contact qualified technicians for proper diagnosis, advice and repair of faulty components.
SYSTEM PARTS & UTILITIES
Always plug in only recommended components to right usb or charging ports to avoid short-circuiting of the components.

Appendix 12: Best practices graphic bronchure – Kiswahili Version.


USAFISHAJI WA SOLA.
Panguza paneli ya sola kwa kutumia maji safi bila sabuni kuondoa vumbi ili kudumisha uwezo wa kuweka kawi na chaji.
USIWEKE SHINIKIZO ZAIDI KWENYE SOLA.
Kuwa makini wakati wote unapotumia paneli ya sola ili kuzuia uharibifu au kuvuvnjika.
NUKTA WA MWELEKEO WA SOLA.
Weka paneli ya sola katika sehemu ya kiwango cha pembe nukta inayohakikisha unapata mwanga wa kutosha haswa wakati wa mchana (Saa sita)
Weka paneli kwenye sehemu nzuri mbali na watoto.
WEKA SOLA MBALI PASIPOFIKIWA NA WATOTO
PATA HUDUMA KWA FUNDI ALIYEHITIMU.
Kwa uchunguzi, ushauri au kurekebisha sola iliyoharibika,tumia fundi aliyehitimu kila
VIPENGELE VYA SOLA.
Tumia vifaa vilivyotambulika na kudhibitishwa ili kuzuia uharibifu wa poti za mtambo.

Appendix 13: FEEDBACK FORM.

REPIC Schweizerische Eidgenossenschaft Confédération suisse Confederazione Svizzera Confederaziun svizra
With support from:
State Secretariat for Economic Affairs SECO
Swiss Agency for Development and Cooperation SDC
Federal Office for the Environment FOEN
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GENERAL INFORMATION

1	Date	
2	Name of Respondent	
3	Phone Number	
4	Village	
5	Location	
6	Name of Interviewer	
INSTRUCTIONS: Please ask the questions and write answers/tick the boxes appropriately.		
A. Your Solar Home System		
1	Do you have a solar home system?	Yes ☐ No ☐
2	What is the type and model of the SHS?	
3	For how long have you had your SHS?	
4	Where did you purchase your SHS?	
5	Is the SHS in use?	Yes ☐ No ☐
6	If no,why?	
B.Solar E waste Management		
1	What did you learn today?	
2	Your level of understand what is E-waste (obsolete solar components)? E-waste impacts on health, environment and economy and Sustainable E-waste Management after the training (please tick)	Excellent ☐ Average ☐ Poor ☐
3	How would you dispose off the product once it gets to end of life?	
4	Would you be willing to collect obsolete solar components on behalf of Solibrium?	
5	What would be your expectations?	
6	Would you recommend use of our E-waste Solutions to others users of Solar products not sold by SOLIBRIUM?	
7	If no,why?	

8	Do you know of someone else (organizations/instituitions /recycler/ repair shop/refurbishing center) collecting obsolete solar components?	Yes ☐ No ☐
9	If Yes kindly give us the name of the a (organizations/intuitions /recycler/ repair shop/refurbishing center) and contact details	
C. NATURE OF E WASTE STREAMS IN YOUR POSSESSION		
1	What is the nature of your E-waste streams if you have them?	
2	a).Obsolete solar components only (i.e Solar kits, batteries ,solar panels, charging systems, cables etc);	Yes ☐ No ☐
3	b Mixed E-waste streams (i.e large ,medium and small household appliances, office equipment, etc)	Yes ☐ No ☐
D.General comments/Any Recommendations to improve our E-waste management solutions (disposal, collections, transportations, recycling)?		