Kerosene

Case study 1

My name is Anna and I live in London. I recently went to visit a school in Tanzania, Africa. I was staying with the Deputy Headmistress of Changalikwa School, Mrs Gabwara, her husband and her four children. Her sister, with two very young children, also live with her.

The house was small for nine people with just two bedrooms, a living room, washroom and kitchen. When it was bedtime, Mrs Gabwara led me through to the bedroom by the light of a kerosene tin lamp and left it on the floor outside my door.

This lamp was left burning all night and I could smell the kerosene vividly despite having a closed door between me and the lamp. I couldn't help but cough and splutter every time I passed through the hallway. The black smoke pouring out of it stung my eyes. The light that the lamp provided was very dim and I had to strain my eyes to see.

It made me realise how lucky I am to live in a house with electricity.

Overleaf: A tin lamp burning kerosene.


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Solar power at home and school

Case study 2

Judy and Eliza live with their family near the village of Makunga in Kenya.

After it gets dark, most of the families in the area must use kerosene tin lamps to light their homes. These lamps are very basic and are particularly dangerous for children. They are made from a small tin can filled with kerosene oil which is burned leaving a big open flame to create light for the family. The oil is very expensive and fills the house with black smoke.

The family now have solar lamps in their house and they are able to live without the pollution from kerosene. The children's parents are glad that they don't have to worry about the danger of the lamps or the pollution around their daughters anymore. They also save lots of money because they do not have to buy the kerosene oil so they can now spend more on food. They have even started keeping chickens!

With the help of SolarAid, the Kokonya family bought solar lamps for their house which can give reliable light every night.

Their school also bought some solar lamps to light dormitories for the children who live too far away to travel home every day. The light is now free and the money that the school saves on kerosene can be spent on books and paper for the students.

Overleaf: Eliza in front of her home.

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Michael

Case study 3

Michael Phiri (on the left in the photo) is a dependent of the Liche family and a pupil at Maguya School in Zambia. The family used to rely on candles to light their home. Now they own a large solar light.

Michael uses the family solar light to put their pigeons in the dovecote at night and check on their cow and goat. His sister also uses it to prepare dinner and Mrs Liche can do chores in the evening.

Best of all, the children can finish the evening off with their homework. All powered by solar and not a flame from a kerosene lamp or breath of toxic smoke in sight.


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Enock

Case study 4

Enock lives in Bomet in Kenya. He just came top in his exams out of 20,000 pupils in the whole county!

Enock's family bought a solar light half way through last year. His results were published in the newspapers and now he is famous where he lives. He is uneasy with the limelight but delighted by the solar light.

Enock says, "I used to read up to 7 o'clock because of the lack of light. But now I can read up to 10 o'clock". This is 3 more hours a night because of the solar light, he explains, and it helped his studies a lot.

Not only is he top in his county, he is 55th best student in the whole of Kenya.

Enock's elder brother, Neyamiah, wishes he had had a solar light when he was studying. "I could have scored a lot of marks with a light like that, I would have done better," he says.

He explains that it's not just Enock, though, that benefits from the light. His mother uses the money she would have spent on buying kerosene to buy other things for the house, and she uses the light itself to help when she is cooking.

Overleaf: Students at Enock's school in Kenya.
Right: Enock studying by kerosene before getting his solar light.

Elizabeth

Case study 5

Elizabeth is a very hardworking student from Chipata, Zambia, who enjoys going to school. Before she got a solar lamp, Elizabeth and the other students found it difficult to fit in all their homework and exam revision before it got dark. "We used to use torches. Some of the students didn't even have paraffin at home so had no means of studying in the evenings."

However, now she has solar light, she can work after it is dark. She even chooses to start studying at 5am to fit in extra work before school starts.

Elizabeth believes that she, her community and even the whole country will benefit from the power of solar. She says, "The solar power conserves our environment and having the lighting improves our grades, allowing us to compete with other schools. The increase in student performance throughout the school will promote the development of our nation because children will grow up to have more professional jobs."

When she finishes school, Elizabeth would like to be an engineer.

Overleaf: Getting a solar light.
Right: Students with new solar lights ready to take home.

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The Sakala Family

Case study 6

The Sakala family live in Chipata, Zambia.

They used to burn kerosene and candles to light their home. It cost a huge amount of money and cut the day short because they could not afford to keep the lights on. The family owns a mobile phone and they used to have to travel several hours to the nearest town with electricity to re-charge the battery.

Then they bought a solar light and now there is so much more to do!

Mr Sakala, the Headmaster of Maguya School, uses the extra 'light time' to work into the evening and be with his family.

The lamp can also charge mobile phones meaning no more long walks to the nearest town.

His two sons (right) can now do their homework safely in the evening.

Overleaf: The Sakala family in Zambia with their solar lamp.
Right: Mr Sakala's sons, ready for school.

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Stan the Solar Man

Case study 7

The primary school in the village of Kembu is famous in the area - because of solar lights!

Stanley Rigoud, the Head Master of Kembu Primary school, now has a nickname 'Stan the Solar Man' due to his success in sharing the benefits of solar lights in his school and community.

Kembu Primary School bought the most lights of all the schools in the area, over 800 lamps. Now more than half the students in Class 8 (the final year of school in Kenya) own a solar lamp.

Stanley is convinced that these solar lamps, costing just 700 shillings (£5), can change his students' lives.

He explains, "The other time they were buying the kerosene they could use more than 700 shillings every month. These days they are just using the sun, there is no cost at all, and now they are saving the money. Instead of buying the kerosene, they are buying the exercise books and the pens for their children… And the lamp is cheap, the cost of just a single hen!"

Overleaf: student at Kembu Primary with new solar light
Right: Stan the Solar Man (right) with SolarAid staff member Victor