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One such boy in the bridge school is Ganesh, an exceptional player of the Dhol at such a young age. Being a part of RAAG, he gets to improve his talent as well as knowledge of the Dhol and expand his world to learn puppetry, painting, etc., so that when he leaves the bridge school, he'll be confident enough to perform in front of the public and also have some basic knowledge about social and environmental issues which he can build up to become a rational citizen. If he had remained a dropout, who knows whether his talent would have been encouraged or not?

Community Radio

The work of the communication team is helped by the Tilonia Community Radio operated by the local women. It was started in 2009, after SWRC was allocated the 90.4 Mhz frequency. Around 40,000 people can listen to it in the nearby villages within a radius of 15 kms from Tilonia.

Programs include folk music, local news, development programmes, awareness programmes regarding the social issues and government schemes. Occasionally, interviews of public officials,

GANESH

11 year old dhol player from Bridge School- Singla

You play exceptional dhol. What do you want to be when you grow up? I want to be either a dhol player or a police

officer. From whom did you learn to play the dhol? Are you inspired by someone?

I learnt to play the dhol from my father. He is a stage performer. He plays in orchestras and also at weddings.

How do you feel while playing the dhol in front of guests or classmates?

I feel very happy when I play the dhol. I feel some new energy passing through me if I play the dhol after studies and I feel rejuvenated. I love to see our guests and classmates dance to the beats of the dhol.

What kind of beats do you play? I play bhangra beats, wedding beats and also some beats for which only the girls and women are supposed to dance. You are a part of the Raag initiative. What are you learning here except the dhol? I like Raag classes very

much. We are allowed to draw and paint whatever we want. Our gurus have also taught us how to make puppets from papers and clothes. I want to make puppets and use them to narrate stories in my commu-



postmasters. bank man-

agers, etc., are broadcast. The radio channel is on air for a few hours in the morning and a few hours in the evening.

Ram Niwasji -**Communication Section** Leader

Ram Niwasji is a lyricist, singer and concept developer for the communication section at Tilonia and has been associated with Barefoot College for around 40 years. He has composed songs on the NREGA, RTI, social issues, etc., and these have become very popular with the people.

He comes from a village where the casteism was so bad that the Dalits including him, were denied access to drinking water by the upper castes. Once there was a proposal from Barefoot College to set up a hand-



Community Radio Station

pump in his village and the upper castes wanted it in their part of the village so that the Dalits could not come there. But Ram Niwasji, wrote to the Sarpanch and the Barefoot College, demanding that the handpump be set up in the Dalits' area because all this time the upper castes had been depriving them of water. After this demand of the Dalits was granted, Ram Niwasji joined the Barefoot College.

This handpump became the game changer in his village as one summer all the handpumps except the Dalits handpump had become dry. Left with no other option, the upper castes were forced to come to the Dalits' pump, wash it and take water. But the Dalits said that this pump belonged to them and so the upper castes could use it only after the Dalits had taken their water. A furious upper caste member broke the pail that a Dalit was carrying and this led to a case being filed against him. Only after this, did the upper castes realise that their hegemony had to end and that the Dalits should be treated equally.

SOLAR ENGINEERING, SOLAR COOKERS AND SOLAR MAMAS

he entire campus of 16 buildings is powered by the rooftop solar panels - about 600 of them - which generate 50 KW of electricity per day to power the fans, lights, water heaters and the community

Solar panels have been set up by the college in surrounding areas too, so that people of the nearby villages get the benefits of electricity without having to pay costly bills.

There are many people in the developing and under developed nations, still living in darkness. The reasons could be remoteness of location or inability of the government to supply electricity - in underdeveloped countries like Gambia, Sierra Leone, Zanzibar and even in places like Ladakh, Manipur, Bihar, etc. in our own country. More than 60 years have passed since independence but electricity has not been able to reach so many villages in the country. During every election, parties promise to totally electrify India but it has not happened yet. However, in all these places there is one thing in common, i.e. availability of plenty of solar energy and so Barefoot College decided to train these people to set up their own solar energy systems, thus reducing the dependence on the government. And so far the result has been wonderful, with solar "Mamas" (that's how solar engineers are fondly called in the community) from 73 countries being trained till date and solar electricity benefitting about 5,00,000 people. Barefoot has set a target of delivering solar lighting to 1 million people by 2018, through the solar Mamas. The External Affairs ministry supports the Solar Mamas initiative of Barefoot

college and women from least developed countries come here to get trained on a full scholarship pro-

gramme.
The Solar Mamas initiative has made it possible for women across the world to participate in the development of their community in spite of being illiterate or having no formal education. Each of these Solar Mamas, whether young or old has a unique story to tell



Lucy Naipanoi

SITA DEVI, SOLAR **COOKER ENGINEER**

How did the idea of setting up a solar cooker workshop come up?

Around 15 years back, a German engineer, Wolfgang Seppler visited our campus, just like you are here today and he presented the idea of a solar cooker manufacturing team to Bunkerji. So, he trained a few of our ladies to make the solar cookers and then returned. After that the ladies perfected their skill through trial and and subsequently some other ladies also learnt it from

How many people are working in your section?

At present there are 3 of us. All of us have just the minimum education to read and write.

Please tell us the different stages of manufacturing a solar cooker and the time taken.

We manufacture parabolic solar cookers which are $2.5 \mathrm{\,sq}$ m in size and weigh 130 kg. It takes nearly a month to make a solar cooker. We need to do bending, cutting and welding of the materials like the metal rings, glass pieces and the cooker. Measurements have to be precise otherwise the cooker won't work.

Apart from this there is a builtin spring and clock system to keep all the 300 (9cm x 12cm) reflectors in sync with the position of the sun throughout the day

What can be cooked and how long does it take?

You can make fried items, boiled and steamed items. Within 10 minutes, 1 litre of water can come to boil. Within an hour, 20 litres of water can be boiled, so even large quantities can be cooked. Parathas and chapattis can be made quite easily.

How does one purchase a solar cooker?

For purchasing, you must contact the Women Barefoot Solar Cooker Society. We give training to those who want to purchase and if the place is nearby, our team will go and install it. The price is 13,000. Installation and transport have to be paid for separately.

Mostly there are no maintenance issues but if any issues arise, our team repairs the solar cooker.

and in this cover story I present one such unique story of Lucy Naipanoi, an illiterate grandmother from the Masaai community of Kenya. Lucy was dishonoured and rejected in her own community and left by her husband due to traditions after she lost a finger in an accident. From then to Tilonia and now after completing her training she has returned to her village to become the first Solar Mama of the Masaai community, responsible for installing, operating and maintaining solar electricity systems in her region, thus spreading light among her community.









Clockwise from top left: Solar water heater; Trapping solar energy; Solar training center; Spring and clock system to turn the cooker.

on, she raised her children on her own and did all sorts of jobs to pay their school fees and give them a proper education. She struggled a lot for her children and after years of hard labour, her efforts bore fruit. Her children entered college and taught her to speak English so that she could earn more in the market by selling beads to tourists. And when Barefoot approached their village with the offer of training a grandmother to be a solar engineer in India, she came

When asked why it's mostly women who are trained by Barefoot to become solar engineers and not men, Bunker Roy says that men are mobile and they want a certificate. They want to migrate to other places in search of well-paid jobs. But that's not the case with women, especially grandmothers. They won't migrate and will remain with their community to take care of the solar energy systems and also train others.