



Sunseed Tanzania Trust

NEWSLETTER

May 2007

New Stove Rockets Ahead



A village project co-ordinator building a rocket stove

Sunseed Tanzania Trust (STT) has undertaken work in selected villages in the semi-arid region of Dodoma in central Tanzania since 1996. It works in these villages to reduce the effects of deforestation on, and improve the quality of life of, poor rural families, through its domestic energy programme (DEP).

Traditionally families cook with three stone open fires which fill the house with smoke and have negative impacts on health. The DEP organises the delivery of fuel-efficient (improved) stoves, the Lorena and in the last year an adaptation – the Dodoma Rocket.

Both remove smoke and both use less fuel than traditional open fires. STT is now undertaking formal comparative performance testing

of all three stoves. This started in June last year when trustees Mike and Bridget Bridgwater carried out the first field tests of STT's technical advisor Geoff Beaumont's adaptation of the Uganda Rocket for use in the DEP.

Mike writes "The new cooker seemed

to be a bit slower to cook with but used less fuel than the Lorena. .. More testing is needed when the cookers are settled in and properly dry."

The STT team is now in the process of undertaking a rigorous field efficiency test of the performance of both stoves. Initial preliminary results are encouraging suggesting a saving of fuel by the Lorena compared with the traditional three stone fire and further saving by the Dodoma Rocket compared with the Lorena. Any fuel saving means that a family reduces the current number of 3 trips a week to collect fuel and also the quantity of CO₂ produced. The research is ongoing and the final findings will be posted on STT's website.

Fuller versions of these articles are available at www.sunseedtanzania.org

Urban Project in Pipeline

With encouragement from the previous Regional Administrative Secretary STT has started researching the possibility of undertaking an energy intervention in five urban wards in Dodoma (the capital city). As with the rural project this will promote energy efficient cooking and reduced consumption of fuelwood. STT's initial research showed that poorer urban households are largely dependent on traditional three-stone fires or inefficient charcoal stoves. Accordingly, STT began work in January 2007 appraising the demand for and feasibility of introducing heat retention cookers (HRC).

STT is working with Dodoma Municipal Council (DMC) which is responsible for administering the area. Victoria, with the support of the Chief Community Development and Special Welfare Officer, is working with a DMC female community development extension officer who has 20 years of experience. DMC is providing this woman one day a week for six weeks free of charge

If the result of the research proves positive, and when funds become available, the team will prepare a pilot project design; test this pilot project; and if this is successful implement the main project.

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Dear Reader,

Welcome to this bumper edition of the newsletter. I hope you find much to interest you. The newsletter has new sections. We hope you enjoy them. One of these..... Connections.....is somewhere to keep in touch with STT and past friends. I look forward to your future contributions including letters and photos.

Since April the trust has said farewell to Dilys who has relinquished her formal roles as chair and editor of the newsletter. I have taken over both roles. Fortunately for the trust Dilys has kindly agreed to continue to produce the newsletter.

We have also said goodbye to Meg Arenberg and welcomed her replacements Catherine Smith and Victoria Foster-Jones. Both are now well settled in Dodoma as project development officers. Justin Chidawali, previously a consultant on Mycorrhiza is now STT's first Tanzanian paid employee. While continuing his work on mycorrhiza research his role is extended to include more work on STT's tree planting project. Simba Mbenna continues as our Tanzanian Patron. He has provided invaluable support over the last year in his gentle and kind way. We continue to work with our local NGOs MIGESADO and DODEA.

Mr. Mchome has replaced Mrs Senyagwa as Dodoma's Regional Administrative Secretary but continues welcome support to STT as demonstrated by his kindness, reported elsewhere, in lending STT a vehicle to enable our work to continue despite the demise of our own vehicle.

We have also established two new links with the Dodoma Municipal Council and the Dodoma Institute of Rural Development Planning (IRDP). Both links will help with the dissemination of our technical knowledge and thus contribute to its sustainability in the region.

In the UK we have welcomed two new volunteers: Helen Meikle (yes my daughter) has joined as an administrator and Deborah Oakley is helping with fund raising. Bob Squirrel continues to be our webmaster and is working closely with Helen (M) to revamp our website. The revised version should be running by early June. If you have access to the web it will be worthwhile checking out - www.sunseedtanzania.org - on a regular basis as it will be updated on a fortnightly.

We also welcome two babies - Trish Evan's (trustee) son Tobias and Matt Easter's (trustee) daughter.

In the last year Mike and Bridget made their annual visit to the project and I visited twice. Mike and Bridget are planning another visit in June and Kerr and I will visit in May. I will also be out again later in the year.

Finally I would like to thank my fellow trustees and all the others, mentioned or not mentioned in this letter, who have supported STT and myself over the last year. Without you unsung heroes there would be no STT and the families living in the Dodoma Region who so appreciate our support would fail to receive the stoves and tree seedlings that make such a difference to their quality of life.

Thank you all,
Best wishes

Sheilah (Meikle)
Chair of Trustees



STT team with the new organisation sign outside the Regional Commissioners Compound.

Funding – can you help?

The last year saw the end of the McKnight funding and we have spent considerable time preparing proposals and chasing contributions from new donors. I am optimistic that we will complete a contract with a major donor in the near future.

In the meantime, we have secured donations of between £1-5000 from the Buro Happold Trust and the Kitchen Table Charitable Trust as well as individual donors. These funds are invaluable as they allow us to continue our work with poor families in the Dodoma region.

We had good sales of our Christmas cards this year and still have notelets available for sale.

At the time of going to press we have an STT sponsored wedding that will take place on June 2nd and one volunteer who will run a marathon for STT in the Autumn. Otherwise sponsorship activities are lacking ...can you help?

Meet the New Team

CATHERINE SMITH, PROJECT OFFICER



Born in a coastal Australian town and living my formative years in Sydney, my interest in development was prompted by various people and experiences; for example growing up alongside a disadvantaged Aboriginal community, sponsored children, and perhaps most strikingly during a visit to Cambodia in 2003.

In January 2005, after completing my BSc at the University of NSW (Sydney), with a major in Psychology and minor in Philosophy, I uprooted and moved to Tanzania for six months to volunteer with two NGOs – an HIV/AIDS orphanage in Mwanza, and a children's rights organisation in Dar es Salaam – where I also began learning Swahili. This provided invaluable experience of living and working in a 'developing country' context, and also highlighted my need for formal education surrounding international development.

I began a MSc. Poverty Reduction & International Development at the University of Birmingham in September 2005, which I completed with distinction in September 2006, after moving to Dodoma, Tanzania in June 2006 to work with STT. I performed my dissertation fieldwork in Dodoma, investigating the impacts of rural energy consumption upon household livelihoods.

In June 2007 I will return to UK to pursue my career with an interest in participatory and sustainable development.

HELEN MEIKLE, ADMINISTRATOR



I have been interested in social changes and the impacts that can be created for as long as I can remember. But with a social development professor for a mother and a quantity surveyor for a father there was little hope. I have recently completed a BSc Psychology (hons) and for my sins have now begun my

masters in social research.

Supporting STT with its work in the UK has proven to be more rewarding than I ever imagined. While I am currently not able to spend as much time as I would like on the project, I am able to help the web master with the plans for an updated web page and gradually hope to have a more hands on role.

I plan to take my first trip to Tanzania in November to meet all the people I have heard and written to often. I have however had to promise not to smuggle any animals back to add to my ever growing collection. I look forward to meeting many of you at the AGM in June. Thank you all for your continued support of STT.

VICTORIA FORSTER-JONES, PROJECT OFFICER



I started work as an STT Project Officer in October 2006. I am from Sierra Leone and have lived, studied and worked in the UK for a number of years. I have a degree in Anthropology and a Masters degree (with distinction) in Development and Planning from University College London (UCL). I have 3 years experience in

international development and environmental policy, and two years experience within town (spatial) planning. I also have private and public sector experience, which includes work with local government, NGOs, environmental think tanks and multilateral agencies.

I see my role at STT, after leaving my job as a senior land use (spatial) planning officer for a local council in London, as a 'career progression'. All my past experience has been concerned with various aspects of 'development' - managing social, economic and environmental change - so that the resources available today will also be present for future generations and equitably distributed within a human rights framework. After two years working in a UK local authority I wanted to return to the international field and take on new challenges.

So far I have found STT to be a participatory, gender sensitive organisation and have found the research, field visits, workshops and meetings with which I am involved to be thoroughly interesting.

DEBBIE OAKLEY, FUNDRAISER



I worked for twenty years in the City as a Fund Manager and Company Director for Newton Investment Management Ltd. I specialised in the management of smaller Pension Funds and Private Clients plus a handful of family charities. My focus was primarily on building wealth from surplus funds by

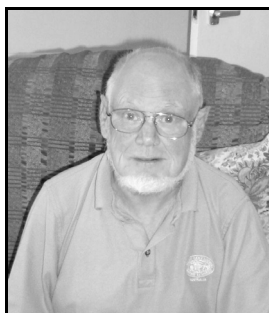
investing predominantly in equities.

In 2006 I left the financial services industry. I wanted to spend more time with my two young sons and to get involved with something more worthwhile.

I have always taken an interest in developing countries and Africa in particular and when the opportunity to join STT arose it seemed like a perfect fit both from the point of view of my interest and the time commitment involved. I have undertaken various types of voluntary work before but never done any fund raising so it's been a case of learning on the job with valuable support from Sheilah. So far it's been very enjoyable and rewarding.

Meet the trustees and our treasurer

You can now meet us all on the website – www.sunseedtanzania - from now on each newsletter will focus on one trustee. This time you have double value because we are also focusing on our long serving and hard working treasurer.



KERR BAILLIE
I've been treasurer of STT for nine years.

I was born in 1939 and attended

George Watson's College, in Edinburgh. Later I trained as a Chartered Accountant and, after qualifying, got a job for a small Edinburgh investment management company. Around this time I met my wife, Susan, and we've lived in Penicuik, a small town south of Edinburgh, ever since.

On my retirement in 1997 I suddenly had an awful lot of time on my hands. So when Susan pointed out an ad. in the Big Issue by a small charity working in Africa, which was looking for someone to act as treasurer and administrator, I decided to apply.

The charity was, of course, STT, and the ad. had been placed by the then chair of Trustees, Dilys Beaumont, who lived not far away. Susan and I had already visited Africa several times, so I had some knowledge of the continent already. But becoming involved with STT got me into a whole new area of which I knew nothing, but found interesting and rewarding right from the start.

We've now visited Dodoma and the project twice, and will do so again soon.

What has been my best moment since joining STT?

When on a village visit I asked one lady whether she liked her stove and her face immediately lit up with delight. That moment will live with me always and has convinced me – along with many other things – of the value of our work.



ALISON BANNISTER
I live on The Ridgeway National Trail in Oxfordshire with my husband, Jon and our

two dogs and two cats. I enjoy exploring the Ridgeway with the dogs, painting and decorating and photographing wildlife.

I work for AEA, an energy and environmental consultancy, managing projects in finance, environment/ energy and social development both in the UK and overseas.

I trained as an accountant with KPMG in Birmingham and then transferred to The Netherlands where I specialised in oil and gas clients. After seven years I studied for a Masters degree in Environment Management in Business in Athens, Greece.

On my return to the UK I took up the post of International Internal Auditor for Oxfam. This work included undertaking short term assignments in a number of Emergencies.

I still undertake short term work for the charitable sector, the latest being a 2 month assignment in western Kenya, capacity building administration and financial staff working for an HIV/AIDs charity.

After two years with Oxfam, in 1996, I took up a post with AEA setting up and running energy advice programmes for the UK government. From this I moved into advising clients on key developments in the UK energy market which involved working in Ghana, Kenya, India, Ukraine, etc. on various assignments.

I took an MSc in Social Development Practice at UCL as, increasingly, my work required an under-

standing of social issues. Here I met Sheilah Meikle, and ultimately worked with her on a variety of research projects for the Department for International Development (DFID), looking at the role of energy in poverty and sustainable urban livelihoods.

I joined STT Board of Trustees in 2006 and was asked to focus on the fund-raising aspects. Since then I have worked on costings and concept notes for funding applications.

Bridgwaters in Dodoma 2006

Mike & Bridget Bridgwater, STT Trustees, visited Dodoma from mid June to the end of July and sent this report:

Initially we had some frustrations with the mobile phone companies who were all changing their numbers which caused confusion, In addition the office internet provider's system was down a lot. All this made communications within and outside Tanzania difficult.

To start with we were busy meeting people and making arrangements, then when STT's new project worker Cat arrived introducing her and making several visits to the immigration to sort out Cat's residence permit. With help from Mrs Ulimwengo, the ever helpful Senior Immigration Officer in Dodoma, all was well.

Our main work was discussing a number of issues with our partners and building and testing stoves (see page 1 for more about this).

We visited several villages, including two we had not seen before, and it was fascinating to see one of Justin's Mycorrhiza workshops in action. It was lovely having Cat with us and everybody took to her immediately.

STT's First Workshop

By Sheilah Meikle (An executive summary and report of the workshop is on the website, or we can post you a copy)

Quarterly partner workshops are a new element of STT and its partner organisations' relationship. They are the result of a recommendation of our independent Management Evaluation Report 2006. They are intended to provide a forum for: sharing feedback on the progress of interventions; exchanging ideas, and developing technical capacity. Hopefully they will lead to greater transparency among STT and the partners and thus encourage greater accountability by all of us.

On the 17th November 2006 STT and partners held their first quarterly partner workshop. It was attended by Dr. Sheilah Meikle (SM) (Chair STT), Victoria Forster-Jones and Cat Smith (STT project officers), Justin Chidawali. (STT

technical officer) and representatives of STT partner organisations DODEA and MIGESADO

The subject of this initial workshop – sustainability - was jointly agreed by the three organisations. The aim of the of the workshop was 'To reach, through discussion, a common understanding of the term 'sustainability' and its relevance for the STT intervention (i.e. the Domestic Energy Project (DEP) and its three product components – the Lorena stove, Heat Retention Cooker (HRC) and the tree planting project incorporating Mycorrhiza inoculation).

The workshop was participatory in approach and included interactive discussions and plenary sessions. Participants either worked in small groups or in plenary session to review the feed back of group ideas and brainstorm around other issues. Notes were provided in Eng-

lish and Swahili.

The workshop fell into five sessions: introduction; nature of sustainability; review of STT interventions – strengths, weaknesses and stakeholders; review of STT interventions – activities and actions for sustainability; and the way ahead.

The workshop was very successful. All participants were engaged and there was a rich and insightful discussion of the issues. The workshop participants (STT and partners) successfully arrived at a common complex understanding of the term sustainability. A large number of recommendations building on the findings of the workshop were developed during and after the event.

By the time you read this newsletter our second workshop will have taken place. This will be reported on our website.

School Visits Project Village

By Cat Smith (A fuller version is available on the web site)

On 10 November 2006, the STT team led the first school visit to a project village. The group comprised 11 boys and girls from form four of Mwaka International School (CAMS). They were a mix of international and local pupils, most of whom had never visited a Tanzanian village.

The day began in the classroom, where Justin and Catherine introduced the students to STT, its interventions and how it works with its partners. This was followed by a short discussion on ground rules for the village visit, which the pupils added to and agreed upon.

The STT team set the field trip to Manhumbulu into the context of the pupils' lessons on development. This session concluded with the pupils brainstorming different types of energy sources - electricity and biomass sources (wood, charcoal, dung). This led to consideration of the ways in which en-

ergy sources influence cooking methods.

Everyone then travelled by two CAMS vehicles to Manhumbulu, where they were met by the Village Executive Officer and the DODEA Village Project Coordinator (VPC). While in Manhumbulu they had the opportunity to ask questions; see an improved stove; interview a traditional-stove-owner and an improved-stove-owner about the effects of their form of stove on their lives. The groups discussed their findings, which were very insightful.

Justin also explained the Mycorrhiza tree-planting methods, showing the students an example of

Mycorrhiza and non-Mycorrhiza hedges at the VPCs house.

The VPC's wife made tea (provided by CAMS) on the improved stove, and the students presented everyone with sugar which they had brought from their homes as a thank you gift, before enjoying tea and biscuits together. The wife of the VPC presented the students with a basket of peanuts to take with them which was greatly appreciated.



Stove builder, Justin, Cat, Obed Lameck (VPC) and students outside the Mycorrhiza hedge at the Obed's house

Firewood & Family Ties:

The impacts of traditional cook-stoves on Tanzanian households.

By Cat Smith (A fuller version is available on the website)

Over 90% of rural Tanzanians rely on biomass energy to use on traditional cooking stoves and have little or no access to modern energy services like electricity and LPG. Traditional stoves consist of three stones about the size of a person's head, which are placed to allow a pot to sit precariously on top, with a fire lit underneath.



3-stone fire

Negative Impacts of 3-Stone Fires

As they are used indoors, it is no wonder that they have huge negative health impacts, including respiratory infections and eye diseases. Children are especially vulnerable to these, as well as to burns caused by the open fire. (See 'Indoor Air Pollution' article on next page for more on this topic)

Another negative effect of the three-stone fires relates to firewood collection and storage. Women in rural Tanzania walk up to 8km several times a week to collect 10-20kgs of firewood, which takes 4-6 hours each time. Not only is this very labour inten-



A domestic fuelwood store

sive, but it also puts women at risk of animal bites, burns, cuts, falls, back-ache and exhaustion, as well as violence and sexual assault.

The well-being, or livelihood, of a household can be described not only in terms of its health and labour potential, but also by looking at education, financial resources, infrastructure supply, natural resources and social relationships. Some of these dimensions of a household's well-being are more difficult to measure than others, but together they constitute a pool of resources that a household can rely on to sustain its livelihood.

Research carried out in August 2006 in nine villages in the Dodoma Region found many previously undocumented effects of traditional cooking methods upon the livelihoods of rural households, including negative impacts upon education and social networks. For example, time-demands on women to collect firewood and tend to fires reduces their opportunity to access adult education, as well as to nurture and maintain important relationships with friends and family, and participate in important community activities.

How STT addresses these issues

FUEL-EFFICIENT STOVES

The fuel-efficient mud-stoves that STT now promotes (so-called 'Dodoma Rocket Stoves') burn wood more efficiently than three-stone fires. This means that it takes about half as much firewood to cook a meal on the improved stove than it does on the three-stone fire, so the demand upon women to collect firewood is reduced considerably. Also, fire burns more easily on the improved stove, so women can spend less time tending to the fire while cooking, and more time helping their children in their studies, pursuing their own education, or strengthening relationships with friends and

family members through participating in community activities.

The improved stoves have a chimney designed to take the smoke outside, reducing indoor smoke so that women and children are less susceptible to harmful impacts upon their health and education.



Dodoma Rocket stove

HEAT RETENTION COOKERS

The Ng'anga Heat Retention Cooker (HRC) does not require any fuelwood at all. Beans or rice can be brought to the boil on the improved stove, and then placed inside the Ng'anga, which insulates the heat and keeps food cooking for several hours. The Ng'anga helps to further reduce the demand for firewood collection, and reduces amount of smoke created indoors.

While these improved cooking methods do not offer an alternative to biomass fuels as a means for cooking, they are intermediate technologies which aim to reduce the negative impacts that are currently experienced by over 90% of the population.

The Tanzanian Government predicted in 2000 that biomass fuels will continue to be the dominant source of energy for cooking in rural households for the foreseeable future, so until alternative and/or modern energy sources are made more accessible to rural households, improved stoves and HRCs will serve to address a very real and very serious hindrance to the reduction of poverty facing rural Tanzanians.

Mycorrhiza:

What it is, how it is used and its benefits

STT's partners inoculate seedlings that they distribute with Mycorrhiza. The inoculated seedlings have a better resistance to drought. In this piece Justin Chidawali, STT's technical officer explains the nature of mycorrhiza and its benefits.

Mycor means fungus and Rhizal means roots so Mycorrhiza means a fungus that has a relationship with the root of a plant. Mycorrhiza has thread like tentacles called mycelium and these are the seeds of Mycorrhiza. They function by helping the host plant to absorb minerals, nutrients and compounds, especially nitrogen. Mycelium helps to direct nutrients from beyond the root zone to the roots of plants that have formed a partnership with Mycorrhiza. In doing so, the host plant becomes more resistant to drought and diseases than those plants that have not formed a relationship with Mycorrhiza.

WHICH PLANTS CAN FORM A RELATIONSHIP WITH MYCORRHIZA?

Most of the plants including fruit trees for example, Papaya (*Carica papaya*), Guava (*Psidium guajava*) and other crops in our Tanzanian environment can form a relationship with this kind of Mycorrhiza fungi and because many areas in the Dodoma region have no trees and are very dry, this method will help to improve the survival of seedlings.

WHERE IS IT FOUND?

Mycorrhiza fungus can be found locally in areas where the land and natural vegetation have not been disturbed by human activities e.g. agriculture, feeding animals and so on.

HOW CAN IT BE USED?

The soil is taken from under a big tree where the soil has not been disturbed by human activities for two or three seasons. Then the

soil can be put in a container or a hole dug in the ground and lined with a plastic sheet with holes to let water get through. It is important to remove stones, pieces of wood, plant maize and beans/ or other crops from the soil. After planting the seeds in the container/hole (trap pot) they need to be watered for three months. After this period they should be left for one week without water and then cut down. The roots and soil should be mixed together to form the inoculum which can be used to inoculate seeds.

SOCIO-ECONOMIC BENEFITS OF USING MYCORRHIZA

STT can benefit by using Mycorrhiza in the tree planting project because many plants will be able to resist drought. This means that local communities, especially women will be able to get firewood and fruit from the trees planted at their homes. Other organisations and many more communities can also learn from the work of STT through dissemination and knowledge exchange.



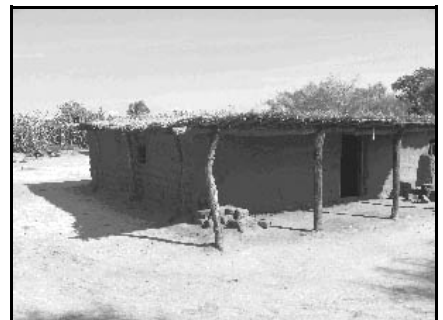
Tree seedlings inoculated with mycorrhiza (above) and without (below)



Indoor Air Pollution

By DODEA, edited by Victoria Forster-Jones

Households in developing countries are often characterised by the use of traditional, inefficient and polluting energy sources for cooking such as wood biomass in the form of firewood or charcoal. In conjunction with inefficient cooking technologies such as the traditional three stone (open) stove this often leads to problems of indoor air pollution (IAP). However, IAP in Tanzania is an area that is largely ignored and understudied compared with other health risks. IAP is not accorded in terms of danger, the same position as that given to malaria, or tuberculosis, to mention just two.



A traditional tembe dwelling with thatched roof

In rural Tanzania, the problem is compounded by the types of dwellings that are normally constructed in rural areas which in conjunction with the use of biomass, and inefficient cooking technology can worsen the effects of IAP, as kitchens are often not well ventilated. Some do not have windows and the small houses are such that smoke gets trapped in the kitchen. In buildings that have windows, the windows are small sometimes less than 10 cm in diameter. In certain instances old pieces of cloth or sacks are stuffed into the small windows further inhibiting the circulation of air.

Cooking in the kitchen is a norm in the rural areas of Tanzania; people do not cook out doors unless it is for a big function whereby they

will also use big cooking pots or oil drums. Cooking indoors is cultural; with the kitchen serving as a focal point for cooking and where children learn how to prepare meals from female household members.



Indoor cooking in traditional tembe kitchen using a traditional three stone stove

Other reasons given for cooking in the kitchen are that smoke from the fire helps to:

- protect the thatch and deter termites from eating roofing material
- preserve cereal seeds such as maize for later planting

Women are often the major sufferers of IAP with symptoms of respiratory infections, and eye disease as the major illnesses experienced. However, many women often do not seek medical attention as the symptoms are often considered normal and part of their genders role as the main cooks in a household.

Improved cooking technology

DODEA along with STT work to reduce IAP through the implementation of improved cooking stove technologies in rural areas. These technologies both reduce fuel consumption and reduce the level of smoke emitted from the stove during the cooking process. In addition, part of dissemination and promotion of this technology also involves encouraging recipients and stove builders to install the new stoves in well ventilated areas of the kitchen as well as the need to maintain open windows during the cooking process.

Sad Demise of a Trusty Vehicle

By Cat Smith

The challenge and fun of being an STT Project Development Officer is the variety of work with which you are confronted. I never expected to become an instant expert on coping with the aftermath of a road accident in Tanzania. Now I am.

Sadly in the dusk of 6 October last year STT's Toyota Landcruiser Prado, acquired during Meg Arenberg's time in 2005, was involved in an accident with a lorry on the Dar es Salaam road 40km east of Dodoma. It was as a result un-roadworthy.

While attempting a right-hand turn into Buigiri School for the Blind, where my friend and I intended to visit a teacher living there, the lorry, heading for Morogoro, clipped the back-right corner of the vehicle



The Landcruiser currently on loan to STT

and sent us spinning into the roadside ditch, where we crushed the cement school sign and overturned. Astoundingly, Andy and I climbed from the vehicle with minor cuts and bruises, where we were met by a large group of Buigiri locals who proceeded to provide us with both help and hindrance. Justin, who had luckily alighted from the vehicle only minutes before, came to our assistance, and with the added help from the school headmaster, order was regained and soon after the traffic police arrived. A statement was made the following day at the Dodoma Traffic Police Station, and I began the lengthy claims process with the National Insurance Corporation (NIC).

A local garage performed the repair estimate – an insurance requirement – and this led the

owner of the garage to express his interest in purchasing the vehicle. Which will mean that STT have their money much faster than if we had waited for the insurance company to deliver the cash. But even this is not swift. No wheels are bad news – STT's vehicle works very hard for its owners, and we needed new wheels as quickly as possible.

Victoria and I recognised the need to be innovative, and began visiting various NGOs and government offices in Dodoma to request the use of one of their vehicles for our village visits as an temporary solution. Fortunately, and somewhat unexpectedly, the Regional

Administrative Secretary (RAS) informed us of a Landcruiser 4x4 pickup that he owns, which he had lent to another NGO but was currently sitting idle. Upon hearing of our vehicle troubles, the RAS

granted STT full use of this vehicle for a year with STT only paying the cost of maintenance and running costs.

In January, the RAS vehicle was delivered to our office and STT and DODEA became mobile once again, albeit with a slightly shaky start while I reacquainted myself with manual transmission.

Thanks to Mike Bridgewater's assistance a 'terms and guidelines for use' document has been drafted for both STT and DODEA project use of the vehicle.

I am looking via the internet and the local grape vine for a replacement for the Prado and am optimistic that we will soon have our own vehicle again—Fingers crossed!

Sheilah's Dodoma visit

My visit was from 13-21 November. This was my second visit to the project since I have become Chair. It was short, hectic but very productive. It gave me a chance to catch up with old friends especially our patron Simba Mbenna on my way through Dar es Salaam to Dodoma, our partners at DODEA and MIGESADO; as well as at some newer ones at the Dodoma Institute for Rural Development and Planning and the Dodoma Municipal Council. I also had the opportunity to meet Mr Mchombi the new Regional Administrative Secretary who taken over from our old friend Mrs Sanagwe.

The main focus of my visit was the sustainability workshop (which is described elsewhere in this newsletter). This was the first of what we hope will be a regular series of four a year. Cat, Victoria, Justin and I worked intensive long days to prepare for and then undertake the sustainability workshop.

I also had time to admire the improvements made by the team to STT's office and to share a very enjoyable team dinner.

I hope, my circumstances permitting, to make regular bi-annual visits to the project. All going well I will be back there in April/May. This time accompanied by Kerr.



Justin & Victoria's desk in newly re-organised office

Connections ...news from our friends and supporters

Dilys Beaumont

Since retiring from the STT board I have kept just as busy as I was before. I had planned to bring my large garden under control, but so far that aim has eluded me due to other more pressing activities. My father-in-law became ill very soon after I handed over the reins to Sheilah, so a lot of my time was taken up with caring for him until he sadly died in August. Then there was the clearing of his house, which was a mammoth task as I don't think he or my mother-in-law ever threw anything away, and they had a large house. On a much brighter note, in January I started a new job as an administrator with the TUC at their regional office in Leeds. This I really enjoy, though it is hard work. I am involved with the training side of the TUC, specifically training courses for union representatives and stewards.

Sarah Richardson

I spent a stimulating and enjoyable four months in Tanzania with STT as Project Assistant. Upon my return to the UK I set about finding a job in earnest and a handful of interviews later was offered a job by a Commonwealth NGO called LECT. I have been working as a Programme Development Officer at their office in London for about 8 months now, managing a portfolio of international professional development programmes for Commonwealth teachers. A major highlight has been leading two study visits to Malawi focusing on Citizenship and Health Education. I am excited to be involved with enhancing the quality of education and also in promoting an international dimension in the UK curriculum, thus raising awareness of development issues amongst teachers and students.

Brenda Elliott

Brenda is a long-time supporter of STT. Last December she visited Tanzania, and whilst there she

went to the Serengeti National Park where she stayed at the Serona Wildlife Lodge. There she found the text below :

The tale of the fallen tree

Trees play an important role in the life cycle of the forest for centuries even after they die.

When a dead tree falls to the ground, it adds diversity to the forest floor. Soil accumulates around it and small animals find shelter underneath. A porous decaying log can store critical moisture through long dry seasons. Insects and fungi feed on it, and some fungi pump water from it to the roots of nearby trees. Eventually the fallen tree becomes a nurse log to young seedlings that feed on its nutrients. A log can take as long to decompose as it took to grow.

If the tree falls into a stream, it forms pools where young tilapia can hide from would-be-predators. The insects that feed on these logs serve as food for fish. The wood also slows the stream, minimizing erosion and trapping silt which would muddy the water.

Even though logs in water decompose somewhat faster than on land, a log that fell into a stream when the park was established might still be there today. So when a tree falls in the forest and stays there, it still matters – to an Aardvark that devours the termites eating its wood, to the tilapia that swims nearby or to the African fish eagle that eats the tilapia for breakfast.

A tree that remains standing after it dies is called a snag. Eagles and hawks perch on it while hunting. Owls, bats and woodpeckers use it to nest and store food. A large snag may stand, bleaching in the sun, for as long as a century.

By Bettie Martin Loibooki, Warden, Tanzania National Parks, 1995

The Mhumha Family, Manhumbulu Village

Victoria Meets Mrs Stumai and Mr Alan Mhumha from Manhumbulu village in Dodoma Urban District

In mid January I visited a stove and tree recipient family and one of their two children, a 4 year old boy. Stumai was very happy for STT to interview her for the newsletter. Stumai primarily spoke about the stoves and the impact that it has had on her and her family's lives since it was built, whilst the trees appeared to be Alan's area of knowledge and particular interest, which he spoke about the most. The Mhumha family have lived in Manhumbulu village for 6 years. Before that they lived in Mboro. The family has a Lorena stove [the energy efficient stove made from locally available material such as mud and straw.] What follows is a very open and candid discussion about the stove and tree projects received by families such as the Mhumhas.

(All questions are by Victoria. Responses by Stumai are coded SM and those by Alani are coded AM.)



Mhumha family—l to r Stumai, 4 year old son, Alani

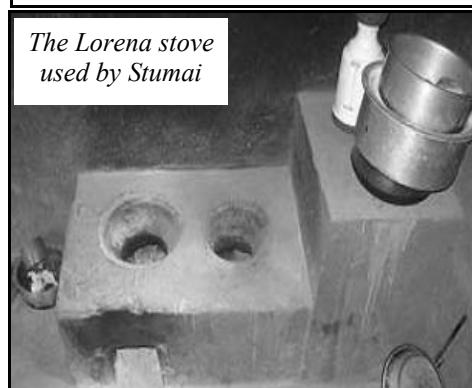


Mhumha family compound

How did you hear about DODEA and their stove work?	SM: People from the village came and told me about the stoves and DODEA; people like Obed the Village Project Co-ordinator
What energy source do you use for: <ul style="list-style-type: none"> ▪ Cooking? ▪ Lighting? ▪ Heating? ▪ food preservation? 	<ul style="list-style-type: none"> ▪ Firewood ▪ kerosene in a hurricane lamp ▪ I don't use any, to keep warm we come inside the house ▪ a hot pot which I bought from the shop, it keeps the food warm
Why do you use these types of energy sources?	SM: Firewood is free and locally available and since we do not have electricity it is expensive using kerosene for cooking.
Before you had the improved stoves, what were some of the disadvantages of using the 3 stone fire, in terms of health, time, food preservation, and the environment?	SM: They used a lot of firewood and produced a lot of smoke. This caused eye problems, as well as coughing and respiratory problems. Children could get scalded from the pan tipping over. We used the old stoves because there was no alternative available.
What were some of the benefits of using the 3 stone fire?	SM: There were not any benefits. [Stumai went on to note that she couldn't understand why people would want to revert back to the 3 stone fire (which has been the case in some areas)]
What are some of the benefits in terms of health, time, fuel use, food preservation, and the environment of the improved stove?	SM: When the fire is lit the stove becomes hot very quickly and so it does not take long to cook things. It also retains the heat very well, and I don't have to look after the fire as much as with the old 3 stone fire. It also produces much less smoke and so my eyes and chest are not affected
What are some of the disadvantages/ problems associated with the improved stove?	SM: When the chimney was a smaller size we had problems with it (smoke would enter the kitchen window). However, Mr. Mhumpha and Stumai lengthened the chimney.
How long did it take you to gather firewood when you had the 3 stone fire?	SM: I don't quite remember, but I was collecting a lot of firewood. I would collect them on different days, quite big bundles.

Field Interviews

<i>How often do you go and collect firewood now that you have the improved stove?</i>	SM: I go four times a month, but I often now gather wood for storing not using [this interview was conducted during the rainy season so Stumai may have been referring to the fact that fresh wood is frequently wet due to the rains at this time].
<i>If having the new stove gives you more time to do other things, what do you do with this extra time?</i>	SM: I do extra shamba work (a plot of land, often used for agricultural farming).
<i>What are the problems of using firewood?</i>	SM: Nowadays there is not enough firewood for the village so we often have to go far away to the nearest mountain to collect sufficient amounts of wood. (Stumai also mentioned that sometimes Kerosene is not available in the local shops).
<i>What are the energy sources in the village?</i>	SM: Firewood is the main one. Firewood for cooking is better than crop residue (crop residue is highly inefficient, burning more quickly) but we use it when there is no firewood available.
<i>Is there a way to get your voice and opinions to the government about your energy needs?</i>	The Village Executive Officers (VEO—elected village level local government representatives) call community meetings where issues and concerns can be fed to the government through the VEO. Stumai would like to recommend promotion of the Lorena stove because it uses less firewood)
<i>What have been some of the main environmental changes that you have noticed in your village over the years?</i>	SM: People were not planting trees before but now many people are planting. There has been an increase in the number of trees in the village from the tree planting efforts. AM: There are many more trees around unlike before because of tree planting. This has led to there being many more trees surrounding our area and in the village. Before, we did not know the importance of planting trees, but now we do.
<i>How would you improve the current stove?</i>	SM: Originally the stove was not as well built as it could have been because of the chimney, but now it is. (Stumai said that now she feels able to improve other women's stoves besides her own).
<i>Who makes decisions in your family about the types of energy fuels you use or buy?</i>	SM: We both do, but it is I who tends to know whether there is any kerosene left and so also provides the money. (Stumai noted that her husband also likes the stove particularly as he was involved in repairing the chimney and because there are no problems with it whereas there were many with the 3 stone fire)
<i>Have you received tree seedlings from DODEA?</i>	SM: I got some seedlings from the Upendo group in 2005 (a group supported by STT and DODEA who have set up a tree nursery and have been trained in Mycorrhiza). We have placed them along the boundary of our compound; they are now two years old. AM: I get trees from the Upendo group, when I hear the news that trees are available I go. I have collected ten seedlings
<i>In the future what do you expect to use the trees for?</i>	SM: Shade and for firewood. In many years to come when they grow big I will prune them and use the wood for cooking.
<i>What type of trees do you need?</i>	AM: I would like to have fruit trees for eating and selling.



STT would like to thank the Mhumha family for their time and for allowing the STT team into their home to conduct the interview. Thanks also to Mr. Sudda of DODEA for interpreting the questions and answers in Kiswahili and

Modified chimney

Nkhome Primary School

Victoria and Mr. Sudda of DODEA undertook the first formal interview under STT's outreach programme.

She, Justin and Mr Sudda visited **Nkhome Primary School** in Dodoma Urban District where they met the **Acting Head Teacher** and the **Environment teacher**, who is also responsible for the school tree nursery. This was established in May 2006.

The Environment teacher, the then Head Teacher (Mr. John Magawa), village stove builders and the head of the village (kitongorji) had received training in mycorrhiza at the school from Justin Chidawali, STT technical officer, and Mr. Bendera of DODEA during 2006.

Two pupils have been given special responsibility for the nursery, a boy (Caro Masima) and a girl (Elisia Msakantemo) from standard 6 and 7. 320 children help to collect water for the nursery from a school owned water hole 2 kilometres away at Kisima. The school bought the water hole in 2006 due to limited water supply in the local area. Pupils from standard 2 and 7 collect water, mix soil, collect seeds from nearby areas, and water the seedlings.

Since the nursery was started in 2006, 5,020 trees have been planted. The largest numbers being neem, mikola and meuji but smaller numbers of other species



Left to right: Caro Masima; Elisia Msakantemo; Environment teacher

including fruit trees have also been planted. The planting period is from May to September. Trees are given to students to take home.



Nkhome School Nursery

Uses of the trees:

- to improve the look of the school grounds, improve the environment
- a source of income (by selling seedlings to local people),
- building
- to make furniture,
- firewood
- shade

Future plans: To increase the

number of seedlings planted and increase the number of fruit, shade and wood trees. Also sell more trees and invest the income back into the school. Also intend that the fruit produced by the fruit trees will be able to help feed some of the pupils. It is hoped that if there are more trees in the village it may rain better. School also hopes to produce medicine from the Neem tree (which has over 40 medicinal properties).

STT will continue and roll out its programme of school outreach and training in Mycorrhiza and tree planting, but this time incorporating and integrating the stoves element of the project.

STT would like to thank the Head teacher, Environment teacher, and students of Nkhome Primary school for their contribution to this profile. We would also like to thank Mr. Sudda of DODEA for his helpful interpretation of the questions and answers in Kiswahili. VFJ

Phase 2 Over and Out

June 2006 marked the official end of the second phase of the Domestic Energy Project. STT and our partners learned a great deal during the 3 years of the project, and STT developed and grew substantially. When we began work on phase 2 we didn't have an office in Dodoma or a permanent project worker whereas by its end we had one long-term and one short-term worker in post, an office and a vehicle.

With STT's help our partners developed more effective ways of delivering, monitoring and reporting on the work in villages as the phase progressed. The emphasis shifted substantially away from heat retention cookers towards stoves during this phase, as the latter proved more popular, more durable and better understood in villages. A high percentage of stoves built are used regularly.

Tree-planting and conducting trials on the use of mycorrhiza were new components of the project when Phase 2 began, but by the end tree-planting had become a very large and valued part of the project, and mycorrhizal inoculation had proved so successful that it was no longer being trialled but was an accepted part of nursery practice. There are now many thousand more trees in villages around Dodoma than there were when phase 2 began, despite persistent drought.

Working with people in arid lands to improve the quality of their lives and the productivity of their land.

Registered office: 9 North Hill, Highgate, London N6 4AB

Tel: 020 8340 7467

E-mail: info@sunseedtanzania.org

Website: www.sunseedtanzania.org

UK Charity No: 1061635 Tanzanian Register of Societies No: 9468