

## DAP Aquittal Report June 2010

# Project to Provide Solar Lighting to rural secondary schools and gifted primary students within Iringa District, Tanzania

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## 1.0 Project Objective:

- 1.1 To provide 20 rural secondary schools in Iringa District, which have no access to electricity with solar lighting.
- 1.2 To assist 600 gifted school students (4 in each of the 144 primary schools) with the gift of a solar desk lamp to study at night in their homes.

## 2.0 Project Implementation:

- 2.1 Funds were received from the Australian High Commission (DAP Grant) which purchased the Solar Equipment for the project from Smart Solar, Nairobi, a subsidiary of Barefoot Power Pty Ltd., Australia.
- 2.2 This equipment was then transported, free of charge, by Johnson Group International, to Iringa. The Diocese of Ruaha received the goods on 21<sup>st</sup> April 2010. They were stored in the container converted for the purposes with the help of The Grace Foundation. The Grace Foundation also provided the funds for the implementation of the project in the field.
- 2.3 The Diocese of Ruaha (Watu na Nuru) in conjunction with District Officer and Executive Officer for Iringa District Secondary Schools drew up a program of 20 Secondary Schools that had no access to electricity or had received outside help to receive these systems.
- 2.4 A small Official Opening was held at Kidamali Secondary School on 21<sup>st</sup> May. See separate attached report.
- 2.5 These solar systems were installed throughout May and June 2010.
- 2.6 The Diocese of Ruaha, Watu na Nuru (light for the people) project, worked with the executive officer for the Iringa District Primary schools to draw up a program of visiting the 144 primary schools to hand out the desk lamps. These primary schools, based around the 20 rural exam centres, were visited by Mrs Fiona Oates, director of Watu na Nuru, on behalf of the Diocese of Ruaha and the Australian High Commission.
- 2.7 A further 12 desk lamps were handed out on 19<sup>th</sup> June 2010 to gifted students at the Diocesan Secondary school by Bishop Peter Tasker, Sydney, on behalf the Australian High Commission.
- 2.8 The remaining desk lamps and solar equipment are being stored by Watu na Nuru as spares and in case of hardships or emergencies and future schoolwork.

## 3.0 Project Feedback:

3.1 Many of the Primary Schools we visited were in very remote areas. As we were not able to travel to all of the 144 schools we left lamps in centres to be distributed to the even more remote schools. I, Fiona Oates, was excited to see the commitment of the students and most of the teachers to learning despite often basic conditions. Most schools were in poor condition with lack of



funding for maintenance and teaching materials. Teaching was in the form of writing on a blackboard, black paint on walls. Very few books and jotters were evident. Students were on average 70-90 to a class. Some desks had 4 or 5 students squashed in to them. It was not uncommon to have 900 students to a school with only 12 teachers.

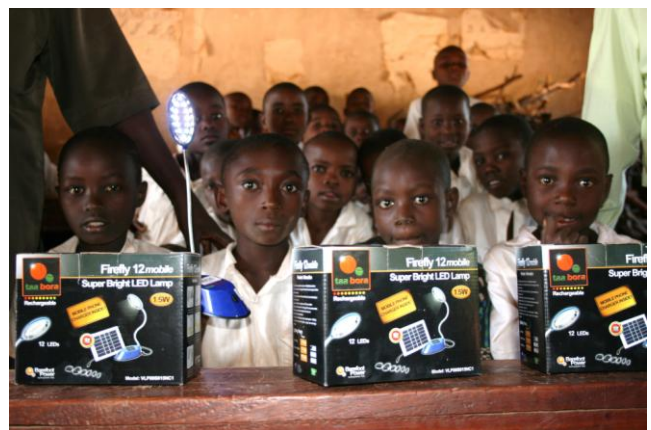
3.2 It is hard to comprehend the huge difference these desk lamps will make to the students. Their delight was amazing. Many of their homes would not be able to afford even a small amount of kerosene for a lamp or a candle for them to study by. Respiratory problems due to fumes from these power sources cause more deaths than any other disease, even more than malaria and HIV, in Tanzania at present. These solar Firefly 12 desk lamps provide clean, safe and bright lighting.





3.3 The primary school students, teachers and parents are all extremely thankful for the lamps. They constantly say that they will bring a huge change to the students lives and enable them to study into the evening for their final

Year 7 exams in September this year. If the students pass these exams they will get the opportunity to continue their education in Secondary Schools.



3.4 Over the last few years the government has been helping each district to build its own Secondary School. This means that it provides funds for the first 6-8 classrooms and then it is the responsibility of the local district and parents to provide the remainder of the buildings and furnish them. We visited schools that were all in differing stages of construction. Some of the larger established schools (had up to 900 students) like Idodi and Pawaga, had had some help both from outside and local institutions and had fully fledged boarding houses. Others had only just started and were using their classrooms for everything: teaching, stores, boarding and staffrooms. All the schools had only a few qualified teachers supplemented by school leavers. All had few facilities, the most noticeable being lack of science equipment. All of the schools, where we installed solar, had no access to electricity and often not even any regular water supply.\*



Demetrios Secondary School



Students sitting exams at Lipuli Secondary School



Solar Installations



3.5 Watu na Nuru installed either 2 classroom systems or 2 dormitory systems and 1 classroom system in each of 20 rural secondary schools. These systems, whilst they will not provide for the whole school provide for part. The idea is that these systems can be duplicated in each dormitory or classroom and are 'affordable' for the schools to continue to install further systems each year. We already have had some schools order systems which they will purchase themselves from Watu na Nuru for next year.

3.6 The Headteachers, teachers and students were absolutely delighted with the systems. When I returned to visit one school there were huge smiles on the faces of the girls in the dormitories. We had intended that the dormitory systems be essentially background lighting for safety reasons but the girls said that the lights were bright enough to study by. We are encouraging the students to buy their own desk lamps to supplement the solar systems to study by.



#### 4.0 Issues:

4.1 Early on in the Secondary School Installations it became apparent that we should be providing a secure cage for the solar batteries. We had asked the schools to do this but deemed it better if we actually provide one with the system then when we leave it is in secure working order and we can then pass the responsibility of the maintenance over to the schools. We will further discuss with the District Officer for schools, a program of maintenance for these systems.

4.2 Distance and cost of travel makes ongoing maintenance a difficult issue but with The Grace Foundation's ongoing support for the Watu na Nuru project should mean that project team members in Iringa will be available to provide advice, troubleshooting and possible repairs or maintenance of systems. There may however be sizeable delays in providing these services due to the distance and difficulty of travelling to some of the more remote schools.

4.3 We were disappointed to find that 4 of the schools we visited had already received some outside help to install partial solar systems. They were however delighted to receive our additional help. In future we will try and ensure our help goes to schools that have had no help so far. A few schools also had generators but in most cases these had already broken down or the schools

were unable to afford the fuel with which to run them by. However all of these only provide power to a small area of the school so there are still many classrooms and dormitories without power.

4.4 Some of these secondary schools asked about larger systems for Computers and Printers. We are not involved in these systems as they need to be much larger and are very expensive. We are hoping to work with Solar Aid who have the funding to provide these systems. In return they will work with Watu na Nuru who have more suitable systems for dormitories especially.

4.5 There were no issues with the 1.5W Firefly desk lamps that we gave out to the primary students apart from the fact that our gifts were only a start. We gave out 600 in a district that has 65,000 primary students!

## **5.0 Future:**

5.1 We are working directly with the manufacturers, Barefoot Power, to refine the design for the classrooms. New 3W led strip lights are now available and if we can use with them with 15W rather than 30W systems it will bring the initial cost down as well as provide a better overall light in the classroom.

5.2 The 1.5W Firefly 12 mobile lamps which we have been providing for primary students have been recognised as one of the best products available by Lighting Africa. Also available from Barefoot Power are solar 'home kits', again recognised as some of the best by Lighting Africa.

5.3 The Diocese of Ruaha in its business project 'Watu na Nuru', (light for the people) continues to promote the use these Firefly 12 mobile lamps and schools kits and sells them at affordable prices in the rural villages. We are especially encouraging parents to buy the lamps to help their children with their studies. It also promotes affordable 'solar home' kits for teachers. If teachers have access to solar power in their homes it will give them enormous help to continue living and working in the rural communities.

## **6.0 Additional Comments:**

6.1 Watu na Nuru (Diocese of Ruaha) in conjunction with the Australian High Commission has provided help for primary and secondary students in Iringa District. We would now like to provide similar help for the school students in Kilolo District. We have already been approached by some of the Head Teachers as they have seen the difference it has made to neighbouring schools.

## **7.0 Australian Identity and Publicity:**

7.1 The Official Opening of the Project was attended by the Local Government District Officer, Mr Mihayo, the Executive Officer for the District Primary Schools and the General Secretary of the Diocese of Ruaha.

7.2 All the 1.5W Firefly desk lamps given out were presented on behalf of the Australian High Commission, Nairobi and stickers identifying this were put on each lamp. All the Secondary Schools received a certificate similar to the one attached.



7.3 Letters of thanks received from the Secondary and Primary schools and a signed card by some of the students are attached to this report.

7.4 As the schools are now on holiday we have delayed the Official Handover of the Project until late July. It is intended that this has a high publicity and official profile. It will also have feedback from some of the beneficiaries. Final date is still to be confirmed as we would like to have a representative from the Australian High Commission as well as Grace Foundation in Australia.

## 8.0 Impact of the DAP funding on our Organisation and its Work:

8.1 This project fits within the Vision Statement of the Diocese of Ruaha to meet both people's spiritual and physical needs.

8.2 The rural communities have benefitted from the health, water, sanitation and agricultural programs that the Diocese of Ruaha has and continues to run. They are very thankful that we have extended our programs to encompass the rolling out of solar technology. The District commissioner says that the Diocese of Ruaha has a heart for community development and which is backed up by its involvement in these programs.

8.3 The funding of the Schools program has enabled us to grow our wider 'Watu na Nuru' project to provide affordable solar to the rural communities in Iringa region. It has helped us to continue to show compassion to those around us.

8.4 The funding has also enabled 'Watu na Nuru' to seek other funding partners to enable it to further develop and broaden its work in the rural communities.

