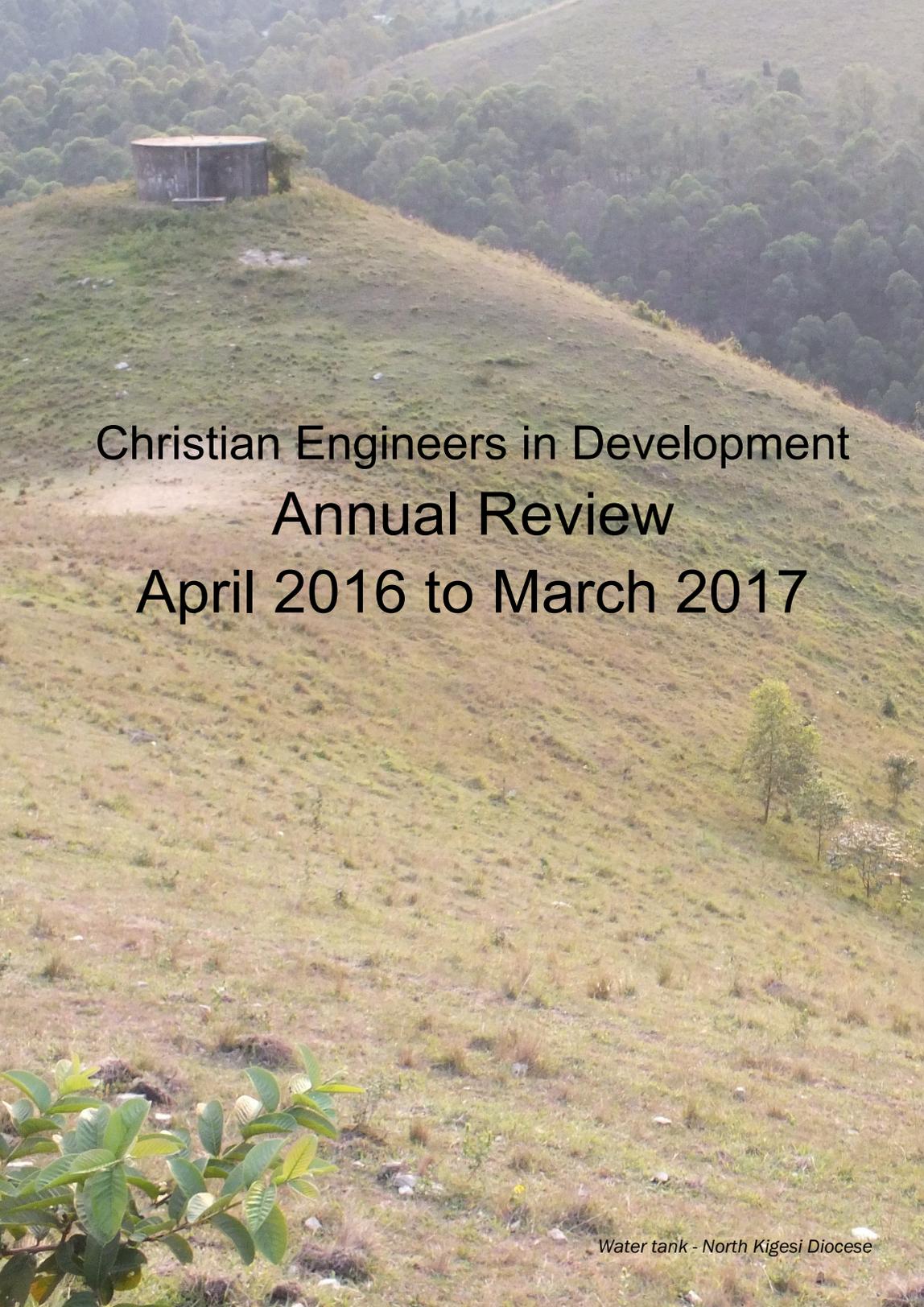




Christian Engineers in Development Annual Review 2016 / 2017



Christian Engineers in Development
Annual Review
April 2016 to March 2017

Letter from the Chair

We can look back on another year of CED's existence with great thankfulness to God. We have seen the ending of some projects and the slow beginnings of others. We have seen rejoicing on Zanzibar; and head-scratching and dialogue at Kisya-Kagaana in Uganda.

The CED directors' retreat has been one of the year's key events; we met together and sought God's will for our organisation's future. Our first question was a very basic one. Should CED continue to exist? At the retreat all the Directors felt that CED makes a difference to the lives of the most vulnerable people in the world. Actually, we sometimes feel frustrated that CED isn't able to do more to help people who have so little. Our time together helped us to clarify why we exist and what we should focus upon, as follows:

Purpose:

CED exists to demonstrate the love of Christ by enabling Christians with engineering and allied skills to help the poorest communities overseas.

Vision 2020:

We will increase our effectiveness in changing lives by:

- Enabling more members
- Developing partnerships (in UK and overseas)
- Applying technologies that are appropriate and self-replicating
- Improving the selection and execution of projects

As part of our vision to improve our effectiveness, we have set up small sub teams to work on each four key focus areas listed above. We are keen to involve as many members as possible in the process of planning and implementing the various actions that will be involved. But we are always

mindful that we need to be realistic. We only have a small membership; and we are all volunteers. Yes, we do need to be realistic; but we serve a mighty God who is the "*Lord who will provide*". Please help with the implementation of CED's vision; if you are unable to help practically, please pray.

Just two closing thoughts: firstly, as we go to press we are waiting to hear whether our two UK Aid Direct project funding applications have been successful. The two projects are the Mayange Refugee Community in Rwanda; and Improving Health through Sanitation in Tharparkar, Pakistan. If these projects are approved, we will truly be able to help the poorest communities overseas. Secondly, I must say how thankful we have been to receive a very large legacy which will really help us to fulfil our vision. You can read more about this in the finance section inside the back page.

Mike Beresford



*Celebration service
Zanzibar Cathedral*



Membership

As of 31st March 2017 CED had 71 members. Over the last year four new members have joined. These are: Paul Darrell, a retired electrical engineer, who met CED Director Jonathan Appleby whilst on an overseas visit. Paul has been actively involved in installing mini hydro systems in Uganda. He is a member of the Southern England CED group. Edward Rhodes, a biomedical/mechanical engineer who recently accompanied Jonathan Appleby on a visit to the Kisya Kagaana project in Uganda. Basile Musonera, a civil engineer from Rwanda, who is involved with the Mayange Project. Margaret Jann, an architect, who has a wealth of overseas

experience and is currently working in Bolivia.

Thanks are due to Rob Wakeling, who has very ably filled the role of CED Membership Secretary for the last 5 years. Rob has been dealing with all membership enquiries and applications and maintaining the database of members and supporters. Rob and his wife Mary will be working at Lee Abbey in Devon for the next few months, so Rob will be (temporarily) stepping down from this role. We pray for God's blessing on them both during their time at Lee Abbey.

Barbara Brighthouse
admin@ced.org.uk

Current Projects - Tanzania

Majahida Bible College

Describing this project one of CED's director's Ian Rankin said, "*goodness, that was a struggle!*" The project was instigated as long ago as 2012: the Bible College at Majahida is run by the Africa Inland Church in Tanzania. Their previous water supply had failed and

CED recommended drilling a new deeper borehole. Unfortunately, it took two attempts to drill the successful borehole which was 105m deep. A drawdown test indicated that a flow of 1500 l/hr was achievable with drawdown of 70m and the pump located at 80m

depth. A submersible pump was fitted into the borehole and connections were made to the existing piping and storage network. Ian Rankin wrote, "It was a struggle. However the final success -

and being present when the water arrived - feeling the relief and seeing the delight on everyone's faces - more than made up for it. God is good!"

Zanzibar

The end of the restoration of Zanzibar Cathedral was marked by a service of celebration and thanksgiving on Sunday 21st May 2017. CED were represented by Angus Armstrong who said; "today was a party! So much colour and pageant. Wow!" Although CED's engineering involvement finished in May 2016, when the World Monuments project to conserve the cathedral was completed, we had supported the spire restoration financially; the upper part of the spire had been found to be in very poor condition and needed to be completely rebuilt.

One very positive knock-on effect of working with Zanzibar Cathedral is that it has brought us into contact with a wide variety of communities on the island, where Christians are very much in the minority. We have started trying



to help two villages, Kiwengwe and Muuongoi. Kiwengwe is located in an area of very shallow soil. The underlying coral contains some large and dangerous voids. Muuongoi is a predominately Muslim community - the local church is wanting to show them the love of Jesus.



One of the choirs at the celebration service at Zanzibar Cathedral

Current Projects: Uganda

We give thanks that the construction works on the Kisy-Kagaana project was completed at the end of December 2016. The 56 standpipes all receive a supply of clean water.

Unfortunately, the water flow from the highest intake on the Kinyankobe spring has reduced considerably compared to the pre-project flow measurements; 0.4 to 0.5 l/s in 2012 - 2015 compared to just 0.1 l/s now. It is difficult to tell whether the 2016 dry season has been worse than usual, or whether this is part of a longer-term pattern. The result is that the storage tank at Kagaana is not receiving a sufficient rate of refill to meet peak demand, meaning that some users have to wait until late afternoon to get water: an unacceptable situation.

The CED team responsible for this project are currently working on a technical solution. The team is keen to avoid the need for pumping which tends

to be less sustainable. It would be ideal if they are able to locate additional spring eyes at a point high enough to allow a gravity feed to Kagaana: however, this may not be feasible and a decision may only be possible at the end of the next dry season when the flows can be verified.

CED is always keen to evaluate the long-term outcomes of its projects. The benefits to the community should be measurable after the project has been operational for a year (January 2018). At that time it is planned for a final evaluation survey to be conducted by Drs Patricia and Hugh Stradling: they will determine the benefits of the project in terms of infant mortality, school attendance, as well as the community's general health. They will also assess any improvements to the standard of living and well being of the local population.

John Holloway



The Kisy-Kagaana Project - one of the standpipes

Current Projects - Pakistan

Sanitation in Sindh:

Following the success of the Scottish Government funded project that ended in March 2016, PVDP and CED agreed to work together for six months to address sanitation issues.

CED developed a design of perforated cement lined pit latrine. These were installed in twenty villages, with the local school assuming responsibility for the structures. This is a brilliant idea, since the children act as ambassadors for good hygiene and influence behaviour in their own homes. PVDP also introduced a simple design of tippy tap to the communities, so that good hygiene



Pit latrine - Sindh Province

could be maintained, despite the lack of water in that region.

Projects in Development:

Pakistan - Improving health through sanitation

The team that worked on the Sanitation in Sindh project described above have been collaborating together on a new project in the Tharparkar area of Sindh in Pakistan. The people living in the Thar desert are among the poorest in Pakistan. Poverty coupled with poor education results in a very high infant mortality rate. CED and PVDP have

applied to the DFID sponsored UK Aid Direct Community Partnership Fund, for support for the £252,000 budget. The three year project aims to lift 15,000 in 60 villages in the region out of destitution. It aims to eliminate the problem of open defecation, improve water security, improve health and improve the status of women.

Uganda

We are currently looking into a number of interesting potential projects:

Rwentamu: we are hoping to be able to secure funding for the design and construction of a large water storage reservoir at Rwentamu, having visited the site and carried out a survey of the area last year.

Rubabo Hydropower Project: this is an exciting project initiated by a local team of technicians who have experience of operating a nearby hydropower scheme. Their vision is to

build a new hydropower scheme on the Rubabo River, and reinvest any profits in the local community, thus helping to reduce poverty in the area. The hydropower project is likely to be in the range 0.8 – 1.2 MW, and will require substantial capital investment to construct. CED are in discussion with the developers, with a view to us providing engineering advice and also carry out the detailed design of some of the project. It is hoped that the design work will take place over the next two years.

Jonathan Appleby - Project Coordinator

Projects in Development

Rwanda

The last year saw a re-establishment of some of the previous connections made in Rwanda by Ian Rankin and Eddie Thomas back in 2006, when Alan Michell visited Rwanda with a group from Southover CofE churches in Lewes, East Sussex. These connections were with Bishop Nathan Amooti of the Anglican Diocese of Cyangugu and James Rubakisibo Of RHEPI (Rwanda Health Environment Project Initiative). A new contact was also made with Pastor Charles Semwaga of the Faith Center Ministries Group of Churches who are based mainly in the Eastern and Southern Regions of Rwanda.

Pastor Charles introduced us to a Refugee Community based at the village of Mayange in the Bugesera District of the Southern Region. This is a poor, but growing, community of some 36 households. CED has developed a project proposal to provide household rainwater harvesting, a kitchen garden and home improvements for each of these houses. It will provide health and education improvements, empower the



women and teach the skills needed to ensure sustainability and integration with the wider community. An application for funds has been submitted to DFID's UK Aid Direct Community Partnership Fund; the outcome is due to be announced in June. If successful, CED will be working with both Pastor Charles Semwaga and James Rubakisibo. The project is planned to commence in January 2018 and continue over a two year period. Our thanks go to both Charles and James for their assistance in preparing the project proposal.

Alan Michell

Tanzania

Last year whilst in Mwanza, Tanzania, to visit a project at Majahida Bible College, Ian Rankin had the opportunity to meet with the Mayor and District Executive Officer of Chato, who were seeking help with water supplies in their district. The outcome of this meeting was that in January of this year Rob and Barbara Brighthouse undertook an exploratory visit. In this they were greatly assisted by Rev Dale Hamilton, head of Kwa Pamoja, a local NGO.

Having toured the length and breadth of the District visiting existing water supplies, some functioning but many

not, as well as visiting areas where the only supply is a dirty river 3km distant, we drew up a list of ways in which CED might assist. This was discussed at the February Board meeting, following which a proposal was put to Chato District officials.

The three potential projects which we hope to tackle involve assisting the District Water Engineer to design an extension to a supply which is pumped from Lake Victoria, capping springs and repairing pumps in Kasala in the east of the District and completing up to 10 boreholes in Mnekezi, to the south,

which currently has no safe water supply. However, further information, including water testing, is required before we know if the latter two projects are viable. Mike Yallop is visiting at the end of May; hopefully on his return we will be able to write a more detailed project proposal and budget and start seeking funding.

Barbara Brighthouse

Sierra Leone

CED were approached by Practical Tools Initiative (PTI) in 2016 for assistance in developing water resources for communities in the Eastern Region of Sierra Leone. PTI is a charity based in Fareham Hampshire, providing equipment, training and advocacy to schools, clinics, disabled people and communities in Sierra Leone.

Alan Michell went with James Fallah-Williams (the UK Director of PTI) on an exploratory visit February/March 2017. Three very different locations were visited. The first was Kenema, Sierra Leone's third largest town. PTI has a skills training centre for disabled people here. They also went to Baoma and Manowa villages, meeting the local community leaders and visiting schools and clinics. Although both these



Unfinished borehole at Mnekezi

communities had water supplies, in almost every instance the wells were not working and the springs were contaminated as a result of poor sanitation.

Whilst there is much scope for assistance in all three of the sites visited, CED has agreed with PTI to investigate the possibility of providing a gravity feed water supply to Manowa from a spring in the hills above the village - this is approximately three miles away and would not be affected by the contamination of current water resources. PTI are currently gathering some of the basic information such as flowrates, respective elevations and survey details that will enable CED and PTI to determine the viability of the project.

Alan Michell



Manowa Village, Sierra Leone

Financial Highlights

April 2016 - March 2017

The bulk of project spending in the year was devoted to the Kisy-a-Kagaana project in Uganda. Work was also undertaken with our partners PVDP in Pakistan and the Majahida Bible College project in Tanzania was completed. Details of all project transactions are set out in the separate table below.

We were fortunate to receive £27,305 to be used for the funding of projects. Major grants were received from the charity Life Trust for Kisy-a-Kagaana (£10,000) and Rwentamu (£5,000).

CED contributed £43,934 from its own funds to support work in Pakistan, Tanzania and Uganda. This included £32,354 from the Project Fund which had been established to cover costs not met from external sources.

Reference	Project Name	B/F	Income	Payments	Transfers	C/F
PA 07	PVDP Development		200	-11,462	11,262	0
TZ 04	Zanzibar Cathedral			-4,741	4,741	0
TZ 10	Majahida	11	3,669	-8,611	4,931	0
UG 00	Uganda Unallocated	263	186	-270		179
UG 35	Kisy-a-Kagaana	21,605	18,250	-62,146	23,000	709
UG 37	Rwentamu		5,000	-2,805		2,195
		21,879	27,305	-90,035	43,934	3,083



Director Jonathan Appleby with entourage in Uganda

Statement of Financial Activities

Year Ended 31st March 2017

CED's opening financial position was strong, and that offered the opportunity to fund worthwhile activities in 2016/17. There was a major use of funds (£56,845) to support project work and overseas visits. As a result the overall assets declined from £119,943 to £61,209; which is still a healthy financial position. However, that position has

been much improved since the Balance Sheet date by the receipt in early May 2017 of a legacy of £154,600 from the estate of the late Mr William Beak who had been a CED Supporter. The costs of administering the charity remain low, since most activity is undertaken on a voluntary basis.

Bill Harper, Treasurer

	Unrestricted	Designated	Restricted	Total	Total
	Funds	Funds	Funds	2017	2016
	£	£	£	£	£
Incoming resources					
Income from generated funds					
Voluntary income					
Donations and gifts	16,690	350	13,607	30,647	23,984
Income from charitable activities					
Grants	-	-	15,000	15,000	106,006
Other income	283	25	5	313	2,393
	16,973	375	28,612	45,960	132,383
Resources expended					
Costs of generating funds					
Costs of generating voluntary income	1,742	-	-	1,742	993
Charitable activities					
Costs assoc. with engin'ng activities	4,673	2,549	93,318	100,540	239,655
Governance costs	2,412	-	-	2,412	2,284
Total Resources Expended	8,827	2,549	93,318	104,694	242,932
Net Incoming / (Outgoing)	8,146	(2,174)	(64,706)	(58,734)	(110,549)
Resources before Transfers					
Transfers between funds	(9,672)	(34,262)	43,934	-	-
Net Incoming / (Outgoing) Resources	(1,526)	(36,436)	(20,772)	(58,734)	(110,549)
Balance brought forward at					
1st April 2016	10,834	76,405	32,704	119,943	230,492
Balance carried forward at					
31st March 2017	9,308	39,969	11,932	61,209	119,943

Christian Engineers in Development



www.ced.org.uk

CED is an association of engineers and other professional people who share their Christian faith and serve God through an engineering consultancy service for Christian and other communities.

Friends and supporters can be involved in CED's ministry in various ways, including:

- ◆ Praying regularly for CED
- ◆ Raising the profile of CED
- ◆ Donating towards projects
- ◆ Fundraising for specific projects

As members of Christ's body, the Church, we endeavour, in both our private and professional lives to:

Respond to the call of God our Father and creator;

Trust His Son, Jesus Christ, as our Lord and Saviour and

Serve our fellow human beings in the power of the Holy Spirit -

That all may be done to the glory of God.

All enquiries to CED Secretary:

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Registered Charity No. 293734
Registered Company No. 1980353

[**www.ced.org.uk**](http://www.ced.org.uk)



Zanzibar Cathedral - Ceiling below organ loft

Front cover - James Rubakisibo of RHEPI inspects a ferro-cement rain water storage jar in Rwanda