



***Newsletter No. 116***  
**November 2022**

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## ***ABOUT CED***

Christian Engineers in Development (CED) is a Christian professional consultancy service dedicated to development work with overseas communities, and through service, to witness to the Christian faith. Operations usually comprise a tri-partite arrangement between a developing country organisation, a funding agency and CED providing technical assistance. CED responds to requests for assistance, improved water supply being the most frequent request but by no means the only one. CED promotes self-help with the maximum use of local resources.

CED's services include site visits, feasibility studies, assistance with project proposals, design, contract documents, procurement, tender evaluation, project supervision, direct labour employment, on-the-job training of local staff, project monitoring and evaluation, assistance with fund-raising and the management of project funding.

CED's income comes primarily from grants for projects together with donations from churches, trusts, members and supporters, and membership subscriptions. Most of the expenditure goes to operations; management costs are kept as low as possible. CED is not a funding agency and therefore cannot directly fund major projects but it can, and often does, fund preliminary investigations for potential projects.

The Association is registered as a Company Limited by Guarantee (without shares) and being a non-profit organisation, it is registered as a charity. It is managed by an Executive Committee overseen by a Board of Trustees, all of whom give their services voluntarily. CED Members participate in the work of the Association either voluntarily or if they depend on earnings for their livelihood on negotiated payment for their services.

Membership of CED is open to any person who is professionally qualified, supports the Aims, accepts the Statement of Faith, supports the activities of CED in any way, or serves as an employee or volunteer, both in the UK and overseas. Becoming a Supporter of CED is open to any person or group that supports the Aims, and wishes to be kept informed of CED matters. Anyone wishing to become a Member or Supporter should contact the Secretary.

## ***Newsletter***

The Newsletter is published twice annually. We'd be delighted to provide additional copies for friends, colleagues, church book stands etc. Please contact [ian@ced.org.uk](mailto:ian@ced.org.uk) and let us know how many you'd like. The newsletter can also be downloaded from the CED website.

The editor would be happy to receive contributions for the next Newsletter. Please send [toian@ced.org.uk](mailto:toian@ced.org.uk)

## ***PrayerPoints***

Copies of our monthly prayer bulletin are available by e-mail or post. Please request a copy by email to [pray@ced.org.uk](mailto:pray@ced.org.uk) or by writing to the Secretary.

## ***Privacy Statement***

For administrative and mailing purposes we hold your name and contact details in our records. They will not be given to any other person or organisation. If you prefer not to receive publicity and information literature, then please inform the CED Secretary ([admin@ced.org.uk](mailto:admin@ced.org.uk)).



**SHARING SKILLS  
CHANGING LIVES**

# From the Chief Executive Officer

## **Board and Executive Committee:**

The Executive Committee met on the 8th September, and the Board on the 29th.

We don't routinely circulate the Minutes from Exec Committee and Board to the wider membership, but it is perhaps worth mentioning that these documents are not "classified information", and we are happy to send copies of Minutes to any CED member who asks to see them.

## **PrayerPoints:**

Our thanks go to William Wilson, Rob Wakeling and Ian Rankin for ensuring that matters for prayer are collated and distributed by email each month. If you don't receive the PrayerPoints email but would like to, please get in touch with William or Ian by emailing [pray@ced.org.uk](mailto:pray@ced.org.uk) – and we'll make sure you are added to the mailing list. Never underestimate the power of prayer!

## **Publicity:**

The Tech Talks are due to re-start on 20th October. A revised programme has been prepared by Angus Armstrong, with assistance from others, and is included in this Newsletter.

## **Projects:**

Which projects are CED and CED members actively involved in just now? Overleaf is a tabulated list of the main projects – it doesn't include some potential projects which haven't yet received Board approval.

## **Key Challenges facing CED at present:**

The effects of Covid-19 appear now to have largely disappeared; at least as far as international travel is concerned. So CED members have been able to make overseas visits once more – to Uganda, Rwanda, Sierra Leone and India so far this year. Overseas



visits are a valuable opportunity to strengthen connections with our partner organisations, and are often the catalyst for new project work appearing. However, we recognise that there is a balance to be struck regarding overseas visits – they do cost money, and they do have a big environmental impact; so it is important to ensure that visits are worthwhile.

On the financial front, fluctuations in international currency exchange rates are having an adverse effect on projects funded from the UK (including from CED funds). The British Pound has lost value relative to most currencies, which means that with some of our projects our funds are now struggling to cover project costs.

## **People:**

We are blessed in CED to have a tremendous wealth of talent in our membership – indeed, our members are definitely our greatest asset. Such a depth and breadth of experience and wisdom, across so many areas of expertise.

We recognise of course that many of you lead very full lives, and there will be times when CED has to "take a back seat" in your life, and there may be other times when you have time and energy to contribute to CED

activities and projects. The challenge for an organisation like ours is to match members' time and talents and availability to the work at hand. I'm sure we've missed opportunities in the past to involve folk, but it is our earnest desire to be able to provide an avenue for service for members who feel that God is

leading them to be actively involved in CED's work.

All of which is basically a rather long-winded way of saying "if you want to get involved, please get in touch"!

*Jonathan Appleby*

Code	Country	Partner	Activity	Project Director	Members involved
TZ16	Tanzania	Diocese of Kagera	Rainwater Harvesting Tanks	Ian Rankin	
TZ18	Tanzania	RWH Programme	Rainwater Harvesting Tanks	Ian Rankin	
TZ19	Tanzania	Faraja Orphans Rescue Ministry Musoma	Development of water supply for Amani School, Musoma	Ian Rankin	
UG40	Uganda	Kagando Hospital	Rwembya Hydropower scheme	Jonathan Appleby	Philip Tibenderana Edwin Wasingya Jono Cox
UG42	Uganda	Kagando Hospital	Kagando Water Supply scheme	Jonathan Appleby	Nigel Heeler Jonny Burns Edwin Wasingya Philip Tibenderana
UG43	Uganda	Kuluva Hospital	Kuluva Hydropower Refurbishment	Jonathan Appleby	Jono Cox Paul Darrall
UG45	Uganda	Kuluva Hospital	Kuluva Hospital Water Supply	Jonathan Appleby	Jonny Burns
RW08	Rwanda	Mayange Community	Mayange Water Supply	Alan Michell	Angus Armstrong
SL01	Sierra Leone	Manowa Community	Manowa Water Supply	Alan Michell	Barbara Brighthouse Malcolm Anderson
SL03	Sierra Leone	Rotifunk Community	Rotifunk Water Supply (borehole)	Alan Michell	
CN02	DR Congo	CAM International	Lwamba Hospital power supply	Rob Wakeling	Jono Cox Graham Miller
IN01	India	Sathya Veda Bible College	College borehole and associated water supply	Jonathan Appleby	Graham Miller Steven Harris Mike Yallop

# Going Paperless

Back in June we emailed everybody inviting them to go paperless. So far 20 people have responded and have also taken the opportunity to request, between them, 36 hard copies of the NL and AR. There is a continuing demand for physical copies of publications so that supporters can pass them around or place on church news stands. We will continue to publish printed copies as well as e-documents.

If you'd be willing to go paperless please go to <https://mailchi.mp/7b76ef97150e/untitled-page> and fill the short form. If you find form filling awkward, please email [ian@ced.org.uk](mailto:ian@ced.org.uk), confirming you are happy for CED to use your data so you can accept emails from CED, and requesting either or both soft and hard copies of CED correspondence.

*Ian Rankin*

# Volunteer Opportunity

Ian would like more help in producing the Newsletter. We have people producing labels, mailing and proofing but gathering information and publishing can be

demanding. If any of our members would like to help by gathering articles, or in any of the other areas where more hands would lighten the load, please contact [ian@ced.org.uk](mailto:ian@ced.org.uk).

# Tech Talks

CED have been promoting a series of online talks although they are not actually all technical. This was initiated during the COVID pandemic when we could not meet in person. It was found to be a popular format and is continuing this coming season. To date we have had 12 talks on subjects as diverse as "rammed earth construction", "ClariWash filtration system", "CED and climate change" and "The Ugandan perspective on development". All these talks have been recorded and are available on the CED website at <https://ced.org.uk/resources/tech-talks/> where they make a valuable resource for future reference.

The season runs through the winter months with talks on Thursdays starting at 7pm. Our programme for the coming year will be:

17 <sup>th</sup> Nov '22	Paul Darrall	A guide to High-Voltage power transmission: what every Civil Engineer should know
15 <sup>th</sup> Dec '22	Steve Morris	Bagged Earth construction and its comparison to other earth techniques
19 <sup>th</sup> Jan '23	Mike Yallop	Compare and contrast different water pumps
16 <sup>th</sup> Feb '23	Stephen Burgess	SODIS water purification
16 <sup>th</sup> March '23	Dr Peter Winfrey	Travel and health in developing countries
20 <sup>th</sup> April '23	Paul Darrall	Solar Power for remote locations

There may be some alterations to the specific dates for speakers after Christmas, so look out for further publicity on the website or our Facebook page and in future editions of this Newsletter.

*Angus Armstrong*

# India: A New Well

Christian Engineers in Development have been working with Sathya Veda Seminary and Bible College, South Kerala, to increase the potential water supply for the campus. The college has been built in a rural area among palm trees and rubber plantations. No surface level water sources are available near to the college as it is constructed on a hillside above a valley bottom stream. Some rainwater harvesting is carried out but this is insufficient for the needs of the college. Students at the college are residential and therefore water is needed for a wide range of uses including washing and cooking. Until recently the college only had two shallow wells which did not supply the needs of the institute and were prone to surface water contamination.

By studying groundwater reports, we have seen that there is an aquifer under the college that has the potential capacity of a source of water that meets the requirements of the college.

CED has been working alongside the Bible College and local drilling contractors in order to construct a suitable borehole to replace the shallow wells. CED member Steven Harris travelled to India in July to work with local contractors (Shankar Borewell) who carried out the drilling and construction of the borehole and with a local contractor who installed the pump, well pipe and a ground level storage tank. During the visit he inspected a number of local wells and quarries



to check on their depths and the likely geology at the proposed well in the college grounds. The CED visit was ultimately successful when a borehole with a diameter of 165mm was drilled to a depth of 264m. The well was drilled into Khondalite metamorphic rock using a rotary downhole hammer with air flush. The groundwater potential of the rock is highly related to the presence of water bearing fractures. The water level above the base of the hole is estimated to be at least 100m and to date a test run filled a 2000 litre tank with water. A submersible pump has been installed to pump the water into a tank located at ground level. Water is then pumped from the ground level tank to another storage tank at roof level where the water is then distributed for consumption purposes.

The college students and staff were very helpful during the works and assisted Steven with groundwater level measurements on a number of occasions and also assisted with the installation of the submersible pump and well pipe. The arisings from the well were used in other construction projects for the Bible college.

*Graham Miller*



# Uganda: New ClariWash Filter, Kagando

This is the new ClariWash filtration system supplying Kagando hospital in West Uganda with fresh drinking water – now installed and operating. The hospital has a population of over 2,000 persons. Contaminated water being consumed in the area has resulted in cases of typhoid. This will be improved with the new purified water. The system is self-washing needing no power supply, control system or operator intervention to backwash. It has no moving parts or need for replacement parts. It is therefore ideal for remote communities in developing countries. The units are formed in fibreglass manufactured in Nairobi and exported to Uganda. The process provides multiple barriers to contaminants comprising of aeration, clarification, dual media filtration and disinfection. Flow rate is 6000 litres/hour.

The next phases of the project will comprise the installation of further filters to supply the local community of over 22,000 people fed



by tap stands in addition to the hospital. The community is currently consuming contaminated water.

*Nigel Heeler*



# Rwanda: A New Challenge

In 2015 the CED Board made a request for someone to take on the role of re-engaging in potential work in Rwanda. I was keen to get involved in CED project work and made my first visit to Rwanda in January 2016. What followed has been an amazing experience and a lesson in trusting God to provide the resources for His work in His good time. Over the past 6 years I have come to know my CED colleagues better and have made new friends in Rwanda. CED has established a good working relationship with a local group of churches, "Faith Center Ministries" (FCM) and its leading Pastor / Evangelist Pastor Charles Semwaga.

The main project to come out of that initial visit was the work at Kavumu village in Mayange which started in January 2019 with a training programme in the construction of ferro-cement tanks led by Ian Rankin and went on to completion during the Covid Pandemic in 2021, due solely to Pastor Charles' dedication to his work for FCM and the community at Kavumu. During one of my earlier visits one lady declared to me that the project had turned her life around, going from "no hope to a bright future"

During the first week in September, Angus Armstrong and I made a joint visit to Rwanda



*Kavumu village: healthy, happy, hopeful.*

with three objectives

1. For Angus to make an independent review of the now completed Kavumu project
2. To visit a Christian Community seeking to live their lives under the New Testament model of the early Church
3. To visit another potential community project as requested by the Mayange local authorities

Angus concluded :- "The project would appear to have been highly successful. The people seen looked healthy, clean and happy. The community appeared to be thriving and growing. The Mayange Executive Secretary met us on Sunday afternoon and reported that they were very happy with the work that CED had carried out in partnership with FCM and themselves."

Related benefits from the CED project, all funded by church and other resources outside of CED, have been repairs to damaged roofs following a major storm, the construction of a church and community hall, and start of work on the construction of a primary school by Faith Center Ministries.



*Gakamba: a new partnership*





## Nyamata

A community of 60 people led by Pastor Rukundo are seeking to live by the example of the early New Testament Church by working together on an equal basis sharing all their resources.

The community are developing their land for agriculture growing a wide range of vegetable crops as well as a large banana plantation, cattle, pigs, and bees for the production of honey.

The outcome of their community efforts has resulted in a new church / community building where they meet for their meals , social and worship activities. They are planning to improve their water storage capacity and have purchased a number of 5,000 litre tanks for this purpose.

Whilst they have a need for a more reliable water supply, they would also welcome advice on agricultural techniques to improve the yield of their crops.

CED were originally asked by a UK pastor Bill Howbert, who had links with the community in Nyamata, to investigate ways of improving their water supplies and some preliminary research had been undertaken by Graham Miller of CED. However, having visited Nyamata, it was felt that there were other

communities in greater need of CED's limited resources, and reluctantly CED would not therefore be proceeding with a new project for this community.

## Gakamba

This is a small community of 25 houses within the Mayange sector and not far from the Kavumu village. Two rows of houses line a sloping central street which is severely rutted due to the effects of the rains which often flood the poorly defended homes. The situation is very similar to Kavumu before the recent project was implemented and Angus is currently putting together a project proposal.

## The Challenge

As the CED involvement in Kavumu decreases and FCM take on the responsibility of maintenance and support, I am stepping back from Rwanda projects as Angus looks to what the future holds for CED in this country. It has been a humbling, yet fulfilling, experience to have been part of this work over the past 7 years and an experience that I would recommend to anyone seeking to be more active in CED's work.

In Jeremiah 29 v 11 God declared to Jeremiah "*I have plans for you...*" I am confident that God will continue to lead CED and FCM as together we seek His will for our continuing involvement in Rwanda.

Please continue to pray for all involved in the ongoing work in Rwanda.

*Alan Michell*

# Pakistan Floods

Our partners in Pakistan, PVDP, have been working with flood victims in Sindh. Subscribers to PrayerPoints will know that CED has been raising funds to support them. £1700 was sent in September.



# Shifting Risks of Malaria in Southern Africa

In past newsletters we have looked at the ways in which climate change is affecting some of the countries in which CED is currently working. This time we present brief extracts from a report prepared for USAID on how our changing climate is likely to affect the risk of malaria in Southern Africa. The full report can be found at [https://www.climatelinks.org/sites/default/files/asset/document/2020\\_USAID\\_ATLAS\\_Shifting-Risks-of-Malaria-in-Southern-Africa.pdf](https://www.climatelinks.org/sites/default/files/asset/document/2020_USAID_ATLAS_Shifting-Risks-of-Malaria-in-Southern-Africa.pdf)

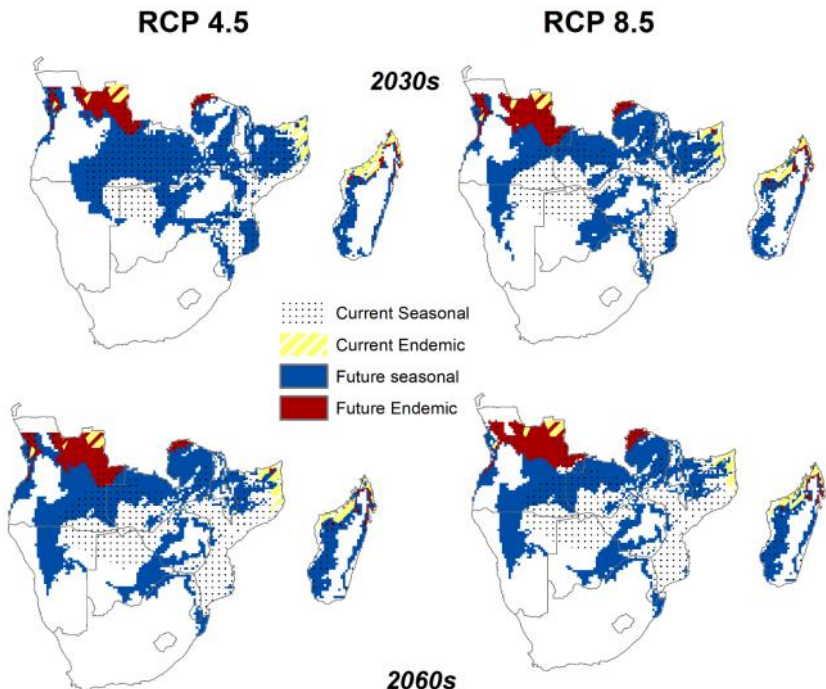
Climate variability and change present both current and future risks to human health. Similarly, extreme weather events put at risk health infrastructure necessary to reduce disease transmission (e.g., health centres, supply chains). In this report, we describe an analysis of climate-induced malarial transmission risk for the Southern Africa region.

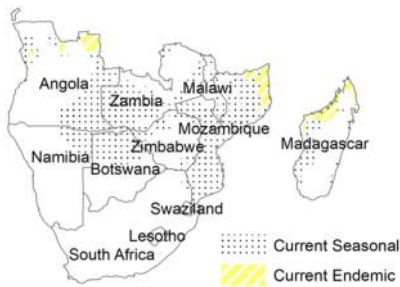
Temperature impacts both the life cycle and habitat of malaria-carrying mosquitoes (genus *Anopheles*) and malaria parasites.

Warmer temperatures may result in new locations becoming suitable for malaria transmission, while currently suitable locations may become too hot, leading to reductions in malaria's seasonal duration and overall risk. The report analyses the shift in malaria transmission suitability based on projected temperature rise over two time periods under two climate pathways.

## Key Findings

- 🌐 Temperatures across the region will rise on average between 0.7°C and 2.7°C by the 2030s to 2060s.
- 🌐 Endemic areas of transmission (10–12 months of the year) are currently restricted to the north of the Southern African region. Endemic malaria will spread, adding up to 2.9 million people newly at endemic risk by the 2060s.
- 🌐 Seasonal areas (7–9 months of the year) will shift from a current hotspot centred on Zambia, outward to the East and





West, affecting as many as 4.0 to 12.9 million people by the 2060s.

- 🌐 The most dramatic shift is from no months to moderate or marginal malaria risk (1–6 months), newly affecting up to 23–59 million people.
- 🌐 There are areas where the duration of suitability for malaria transmission will be reduced from endemic to seasonal. This shortening of the malaria transmission season will impact 2.2 to 3.1 million people by the 2030s

### Implications

Malaria outbreaks in areas where people have little or no immunity to the disease can often lead to epidemic conditions. New malarial services will be required. Conversely, where transmission is reduced, there is the opportunity to reach elimination of malaria.

In many instances, information on projected temperature increases is criticized because it cannot address immediate disease planning needs. However, much like preventive medicine which aims to promote long-term well-being, planning 10–12 years and even further into the future when fighting malaria can save lives and money over the long term and promote sustainable elimination efforts.

*Barbara Brighthouse*

*Climatelinks is a global knowledge portal, and as such contains all sorts of useful information for those who work at the intersection of climate change and international development.*



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*Front cover: new well, South Karala,  
India*

*This picture: ClariWash filter, Kagando,  
Uganda*