Word Forest

Annual Report 2021-2022

This is the Annual Report and Accounts for Word Forest, a charity registered in the United Kingdom by the Charity Commission Charity No: 1172497

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Trustees

Mr Simon West FRSA (Chair of Trustees)
Ms Rikey Austin
Ms Eva Dixon
Mr Philip Gamble
Mrs Helen Roberts
Mrs Izzy Robertson

Chief Executive Officer

Mrs Tracey West FRSA

Managing Director

Mr Simon West FRSA

Our Constitutional Structure

Word Forest was incorporated as a CIO on 7th April 2017.

Our constitution follows the model for a Charitable Incorporated Organisation as set out by the Charity Commission for England and Wales and was adopted on 7th April 2017 and revised on 1st February 2021.

Charitable Objects and Public Benefit

To promote sustainable development* for the benefit of the public in countries to be determined by the Trustees by:

(a) the preservation, conservation and the protection of the environment and the prudent use of resources;

(b) the relief of poverty and the improvement of the conditions of life in socially and economically disadvantaged communities.

*Sustainable development means "development which meets the needs of the present without compromising the ability of future generations to meet their own needs."

The Trustees have had regard to the guidance published by the Charity Commission under section 4 of the Charities Act 2011 in planning our activities.

The positive social impact of our work is considered before we direct our tree-planting communities, and outcomes are directly monitored. This enables the Trustees to be confident that the charity has, through its range of activities, achieved significant public benefit for the community in Kenya, and in countries as determined by the Trustees.

Financial Summary

Income

In 2020-2021 (year 4) we had a total income of **£76,146.94**. In 2021-2022 (year 5) our income was **£81,381.85**, an increase of **7%**.

Income by Category

Category	Amount	Percent	2020-2021	Change
Donation	£45,035.57	55.34%	£42,068.68	7%
Corporate	£17,950.88	22.06%	£7,531.70	138%
Gift Aid	£7,484.82	9.20%	£9,387.92	-20%
Grant	£5,200.00	6.39%	£11,975.00	-57%
Membership	£4,341.35	5.33%	£4,129.09	5%
Sales	£1,369.23	1.68%	£1,054.55	30%
Total	£81,381.85	100.00%	£76,146.94	7%

Our ring fenced income was £24,410.18, (almost entirely for salaries) and our non-ring fenced income was £56,971.67.

Outgoings

Our total outgoings were **£96,978.27. £49,950.52** of this went directly to Kenya. This represents 51.5% of our total income, but **87.68%** of our non-ring fenced income.

For 2022-2023 we have increased our rate of pay for people we employ in Kenya to 200 Kenyan Shillings per hour, or **416,000 KES** per year full time equivalent, which is the same as a senior high school teacher or middle manager.

We ended the year with a balance of £3,609.27 and an average monthly income of £6,781.82, compared to £6,345.58 the previous year - an increase of 39%.

Note we have altered our categories for this report so some figures aren't directly comparable.

Outgoings by Category

Category	Amount	Percent	2020-2021	Change
Events	£775.00	0.8%	£0.00	100%
Fees	£3,513.23	3.6%	£480.69	631%
Travel	£6,609.21	6.8%	£0.00	100%
Office	£11,308.50	11.7%	£7,119.68	59%
Personnel	£24,821.81	25.6%	£12,026.90	106%
Kenya	£49,950.52	51.5%	£50,037.88	0%
Total	£96,978.27	100.0%	£69,665.15	39%

Trustees' Statement

For our 5th year, our Trustees continue to support and advise the charity and oversee its operations. Every major decision was taken in full consultation with the Trustees and they take a very active role in determining the best course of action for the charity.

The Trustees are responsible for preparing the Trustees' Report and the financial statements in accordance with applicable law and United Kingdom Accounting Standards.

The law applicable to charities in England and Wales requires the Trustees to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the charity and of the incoming resources and application of resources of the charity for that period. In preparing these financial statements, the Trustees are required to:

- select suitable accounting policies and then apply them consistently
- observe the methods and principles of the Charities SORP
- make judgements and estimates that are reasonable and prudent
- state whether applicable accounting standards have been followed, subject to any departures disclosed and explained in the financial statements
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the charity will continue in business.

The Trustees are responsible for keeping accounting records which disclose with reasonable accuracy the financial position of the charity and enable them to ensure that the financial statements comply with the Charities Act 1993, the Charity (Accounts and Reports) Regulations 2008 and the provisions of the constitution.

They are also responsible for safeguarding the assets of the charity and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities. The Trustees are responsible for the maintenance and integrity of the charity and financial information included on the charity's website.

This report and accounts was approved by the trustees on X^{th} X 2022 and signed on their behalf by:

Simon West FRSA

Simon West

Managing Director and Chair of Trustees

Independent Examiner's Report to the Trustees of Word Forest

I report to the Trustees on my examination of the accounts of Word Forest, a Charitable Incorporated Organisation (CIO), for the year ended 30th March 2022.

Responsibilities and Basis of Report

As the charity Trustees of the CIO you are responsible for the preparation of the accounts in accordance with the requirements of the Charities Act 2011 ('the Act').

I report in respect of my examination of the CIO's accounts carried out under section 145 of the 2011 Act and in carrying out my examination I have followed all the applicable directions given by the Charity Commission under section 145(5)(b) of the Act.

Independent Examiner's Statement

I have completed my examination. I confirm that no material matters have come to my attention in connection with the examination giving me cause to believe that in any material respect:

- 1. accounting records were not kept in respect of the Trust as required by section 130 of the Act: or
- 2. the accounts do not accord with those records.

I have come across no matters in connection with the examination to which attention should be drawn in this report in order to enable a proper understanding of the accounts to be reached.

The accounts were independently examined and approved on 15th July 2022.

Katharine Long

Charleston Cottage The Street Charmouth DT6 6NX

From our Team

Eva Jefa

Eva has been coordinator of Mothers of The Forest since 2019 and has worked solidly and consistently for Word Forest since then. She is an amazing advocate for everything that enhances the Kenyan environment and helps the people survive the problems of climate chaos. No task seems too hard for Eva to tackle, from learning and then teaching permaculture practices to fully project managing the building of two houses, a much-needed toilet block and a classroom. Eva writes:

The year 2021, socially

The year 2020, better known as the "covid year", had its many challenges and we are all glad we are past that.

It was though, not without effects that are still being felt up to date.

People are still struggling to make ends meet since they lost their jobs. Those who can afford to are acquiring new skills to allow them to copethose who cannot afford to acquire new skills are at the mercy of those who can afford to pay them for doing small odd jobs now and then.

The school girls who had been impregnated during the covid year are now single parents, who have either returned to school if their parents were supportive, or are at home raising their children one way or the other, and when I say 'the other' I mean that they are willing to do whatever it takes to make sure they and their children are fed and clothed. This could lead to other unwanted pregnancies or getting married as a second or even third wife. All these are the wounds that the year 2020 left us with.

The weather

Extremely extreme weather conditions continue to cause havoc that is seriously being felt throughout the entire country. Essential commodities such as food, especially maize meal which is our staple food, are becoming scarce country wide by the day. The price of maize flour has shot up by 110% in less than a year.

Political and economically

To add salt to the wound, the increased geopolitical risks induced by the war in Ukraine weighs adversely on global economic conditions, hence the inflation elevation.

Ukraine is a major exporter of wheat, barley, corn, cooking oil and petroleum products particularly for African countries and the disruption to the flow of these goods is compounding other supply chain and climate challenges, driving up food and gas prices and causing shortages which are pushing millions of people into hunger.

The price of a basic food basket has more than tripled in the course of less than 10 months and fuel prices have risen to the highest. The scarcity for the past 6 months is the worst Kenya has faced in over a decade.

Light in the tunnel

However, all hope is not lost.

A VIP latrine (very improved pit latrine) was constructed by Word Forest a month before the school was to be shut down by the Ministry of Education for lack of a toilet. Ufanisi ECD (early childhood development) school was hand built by parents of the Shakadulo area because there is no school for 11km. Their young children would have to walk for hours to get to school and by the time they got there, they would be too tired to concentrate. 95% of the children stopped going because of the distance.

The few who went had to wait to be at least 10 years and above to begin nursery school. This led to dropping out because of bullying by fellow students or just by feeling that one was the odd one out in class. It was even worse for the girl child as she would begin puberty while still at nursery level.

The school began as a single room mud structure but 3 years back, an NGO known as ADS PWANI put up a 3 classroom permanent structure and there was room for more children. Parents of Shakadulo continued to contribute monthly to pay 2 teachers until the school was properly registered as a community school.

Early last year, the county government assigned a single teacher to the school and as required by law, officials from the Ministry of Education and Health visited the school and discovered that there was no toilet. The officials wanted to shut down the school immediately but the parents pleaded with them and asked to be given time. They forwarded their proposals to different governmental and non governmental organisations and just when they were about to give up, they saw me headed to Mama Mluo's place and that is when Word Forest was approached.

Now they not only have 2 toilets but they also have a staff house that is furnished with a bed and mattress for their teacher.

Hope for a better tomorrow

This, the recent classroom built by Word Forest at Tumaini Zhongwani, the charcoal burners rehabilitation program and the Mothers Of The Forest women's empowerment group (that not only assists the mothers to acquire sustainable income generating skills but also gives the mothers an opportunity to relax, share ideas and just be) give the people hope of a better tomorrow.

CEO response to Eva's report

The staple food Eva mentioned in her report, ugali, made from maize flour and water (rarely milk in the areas we work in), is the most basic of foodstuffs and was

widely available at a reasonable price. A 1kg packet now goes for 250 Ksh (£1.78), having gone up from 120 Ksh.

This blistering hike has been steep and incredibly swift. Also, it comes despite the fact that maize flour was set to go down slightly following a government directive on the lifting of levies announced by Agriculture Cabinet Secretary Peter Munya on 28th June.

The prices of the absolute basics are crippling. As a consequence, around 755,000 children under the age of five in Kenya are set to suffer from acute malnutrition throughout 2022, plus 103,000 pregnant or lactating women are likely to become acutely malnourished and in need of urgent treatment too. Further, the unprecedented drought they're continuing to suffer exacerbates the threat of starvation for millions not only in Kenya but also Ethiopia and Somalia (Issue Date: 9 June 2022 ReliefWeb). Rainfall deficits during the recent March-April-May 2022 rainy season have been the most severe in the last 70 years in all three countries.

This unparallelled catastrophic set of events are the things that have moved pure survival to the top of their priority list and it's quite understandable really. Critically, devastatingly and unfortunately, there is no governmental magic wand in the wings ready to alleviate the pressures on regular everyday people to survive in rural Kenya, or urban Kenya come to that, they're both buckling under the same fate.

The 'business as usual' narrative needs an urgent rewrite. I've no desire to play politics, I'm just an environmentalist but here are a few ideas that might make a good starting point - I'm sure there's a bit of cash down the back of the sofa that could be used for some of the following.

- 1. We need to see governmental unification on a global scale that favours the protection of natural capital and stops and punishes the Big Corp exploitation of it.
- 2. Ecocide needs to be woven into law the world over.
- 3. Deforestation-free supply chains should be pre-requisites for the commencement of all new businesses.
- 4. Existing businesses should be given assistance to tot up their current carbon footprint and historic 'carbon bills' and then encouraged to square up their planetary debt via charities like Word Forest.
- 5. Train travel should be so greatly subsidised it's as good as free.
- 6. Grants and tax breaks for all manner of home and office eco-improvements should be implemented with immediate effect.
- 7. All new buildings should come with eco-no-brainers like top spec insulation, solar generation capabilities, air/ground source heat pumps and so on. Existing housing stock should be retrofitted.
- 8. Environmental education should be statutory in schools, beginning at pre-school.

- 9. There should also be a range of sustainable living courses and resources available free of charge to adults too.
- 10. Oh, and while we're dreaming big, let's have substantial investment in the EV network, everywhere!

If any of these initiatives start rolling out in the coming year, we will be the groundbreaking generation that actually got the memo and acted upon it - we will be responsible for the creation of a far more sustainable planet.

Until then, Word Forest will continue to reach for the stars, wishing it could have a fraction of the investment being made to look at them.

Sue Jueno

Sue is our Special Projects & Fundraising core team member and one of our longest serving volunteers. She was instrumental in assembling a bid writing team to give Word Forest its best shot at winning grants. She writes:

The pandemic pushed many charities into crisis, however many people unable to work during that period kindly gave many volunteer hours and their expertise to help them through. Reach Volunteering, set up to connect people, skills and good causes, was a life line for Word Forest. Their online platform helped us attract volunteers who were happy to share their time and professional skills. We had a fabulous influx of people offering copyrighting, bid writing and marketing skills, and once people were able to return to their jobs we were delighted many remained with us.

Since then we have been able to create a team of bid writers that give their expertise when they have free time during their week, or month. Writing bids is a time consuming task, so to have a group of people with knowledge of the grant system and the dedication in helping us access new funding has been a godsend! Our bid requests are diverse - a range of tree planting projects, classroom builds, new women's empowerment courses, permaculture food forests, charcoal burners rehabilitation courses – the list goes on! So we would very much like to thank Miranda, Alex, Alison, Aru, Caroline, Emma, Kathryn, Kirsty and Lauren for your time and support.

And thanks goes to Reach Volunteering, for without your platform we wouldn't have connected with these amazing individuals!

Jo Smith

Jo joined us in 2020 and is a core team member. She has taken on a variety of roles including expertly managing our Oxford Interns to ensure they have a great time volunteering for us and that they produce top quality outputs from the projects they are assigned to work on. She writes:

One of the highlights of my year volunteering with Word Forest was the opportunity to attend and report at COP26. An eye opening week which gave me a chance to look globally at what is happening, hear what

corporations are doing and not doing, as well as hearing the stories from those on the front line of climate change.

It was a privilege to meet some of my colleagues who I had previously only worked with online and to hear first hand from our scientific expert Bill McGuire the stark reality about what the future holds and to be told the realistic forecast as well as the facts behind the rhetoric that we often hear.

It was inspiring to be able to attend sessions in the Green Zone, to hear good news stories, to hear about the media and script writers recognising the power of their medium and their responsibility to include these climate issues in their stories. It was great to have the chance to ask a question to challenge one of the many panels on their apathy and 'set answers' to try to get to the root of the issue.

I took away the feeling of urgency, to act to make a difference to the future we are leaving to the next generation. So I continue to volunteer with Word Forest to enable us to continue to support the work in Kenya and to find ways to generate income to allow us to rapidly increase the number of trees we can get into the ground.

Lindsey Selleck

Lindsey started volunteering with us to help create and market content on our Education Learning Platform. She has this to say:

I've been with Word Forest since October 2020 and during that time I've helped to turn the Educational Learning Platform (ELP) from an idea to a site which is live and has our first short courses on, with many more being developed in the background. When I joined, there were not many specific details regarding the ELP, just that it was to provide education and skills to make everyone better environmentalists whilst raising awareness of the work done by Word Forest. Initially this lack of specific aims and details was a challenge for me to get to grips with, but now I am happily working on being creative and developing the platform as well as coordinating with our other E-Learning volunteers to make this a great source of information for all environmentalists out there.

As an environmentalist both in my daily life and in terms of my education, it's been a great experience for me so far to spend my time doing something worthwhile for an important cause whilst learning, both using and developing new skills and speaking to new people who share similar interests to me (even if it is just virtually!).

Bethany Martin

Bethany joined us in early 2020 and has been creating fabulous designs for our clothing and other items. She says:

I began volunteering with Word Forest 2 years ago in the role of designer, lending my creative design skills to help create a range of sustainable merchandise, with the aim of raising both money and awareness of the

charity. It came at a time when I was made redundant from my job, in lockdown, and looking for something to fill some time. I couldn't be more glad this opportunity came to me. It has helped me develop professionally, yes, but most importantly, personally, changing the way I view the world and inspiring me to take an active part in protecting the planet. My volunteering role has given me a creative outlet in which to express my passion for the natural world and it is very exciting to see my designs come to life. What I value most though, is the connection I have made to so many inspiring people, and I am thrilled that I can say I too am part of this amazing organisation, which strives every day to make the world a better place.

Jed Robertson

Jed has been a supporter since we started Word Forest, and joined us as an employee in July 2021. He writes:

Working for Word Forest in the role of Digital Media Specialist is especially rewarding. In my quest to tell the stories surrounding our work, I continue to see just how important our mission is to both people and planet. Whether it be the return of a threatened species, a new income stream for a marginalised member of society or the chance at education for a young woman, I am always finding new ways in which our charity makes a positive difference.

It's not just our work on the ground either. Our Educational Learning Platform (ELP) exists to educate people far from the front line of climate chaos so that they may gain knowledge of the rarely taught concepts that have led to our current situation. These things may seem like common sense when you know, but it is imperative that future tree-planters are aware of how important it is to care for the people on the ground who can in turn keep the trees alive.

I think that one thing we do exceptionally well is the three-pronged approach to reforestation. It stands to benefit everyone equally and is a far better option than the often-performative acts of planting trees without the appropriate means in place to keep them alive. Firstly, by rewarding tree-planting through the building infrastructure such as schools, we give the Kenyan people short-term incentives in addition to the long-term incentive shared by us all, the future of the planet. Secondly, by ensuring that tree-planting provides alternative forms of income such as the sale of fruit or ingredients for medicine, we help the people move away from destructive methods such as charcoal burning. This furthers the net increase of trees in the ground and brings in much more money for those in desperate need. Finally, by educating people on how certain planting methods (permaculture, syntropic agroforestry etc) can benefit them, we not only strengthen tree health but food security, financial security, environmental health and countless other things.

With all this considered, the thing I love most about Word Forest is that passion for the environment and passion for improving the lives of people

run in tandem, on equal footing at all times. This unity and true care for all aspects of the process make the charity something truly special.

Simon West

Simon is our Managing Director, chair of Trustees and co-founder of the charity. He volunteers full time for Word Forest and tries to keep it running as well as possible whilst incurring minimum costs. He is responsible for our websites, finances and fills a variety of technical roles. He writes:

I am sometimes a bit pessimistic. The incredible success last year, increasing our income by 84%, surely couldn't continue for the coming year, could it? Our donors' generosity had been tested and we surely would need a lot of luck to match that.

Our luck held, and with lots of hard work by all of our amazing volunteers we managed to increase our income by a further 7% over 2020-2021. Specifically, we more than doubled our corporate sponsorship income and increased donations, membership and sales. Gift aid was down slightly and the discretionary grant we received as our only COVID-19 related benefit didn't happen.

Our outgoings included £3,690 for 11 core members of our team to attend COP26 in Glasgow. Many of us were there for the whole two weeks and we produced 54 articles and videos, interacted with many of the movers and shakers in the world of climate change and made a lot of very useful connections. The entire cost was met by very kindly donated, ring fenced funds from some of our corporate partners. They clearly saw the need for us to be there, to witness the successes and the failures of the COP process, and to spend time networking and spreading the name "Word Forest".

We had TV coverage, with half a dozen appearances on diverse channels, and produced many short videos. All of the content can be seen at https://www.wordforest.org/cop26/

During the year we took on our second employee. Jed Robertson managed to secure a government funded Kickstarter position with us, with responsibility for media. He was instrumental in getting a lot of our video content online. As his funded 6 months with the Kicksterter scheme came to an end, the Trustees decided that they would like to continue to employ him, but could only afford 1 day a week. In October, Jo Smith started an apprenticeship with us, courtesy of a generous donor funding her salary, and in March we also employed Sue Jueno on an identical, one day a week contract.

The end of 2021-2022 saw a flurry of building work commissioned in Kenya and the establishment of a brand new branch of Mothers of the Forest (See our CEO's report later for more details) The proportion of non-ring fenced funds used to fund our projects in Kenya was 87.68%, well exceeding our target of 80%.

The final big piece of news we have is that we purchased four acres of land near Garashi. Our hope is to secure the funds to build a permaculture teaching centre, a tree nursery and a food forest.

Our plans for 2022 and beyond now include becoming a certified seller of carbon credits via Gold Standard. Our corporate partners Oaklin are helping us work through the process and over the coming year we hope that this will become a major new source of income.

Izzy Robertson

Izzy is our Literacy Trustee and is responsible for much of the written output Word Forest creates. She writes many of our news posts and edits, tweaks and schedules those written by our amazing band of volunteer writers. She says:

It's hard to believe that we've just reached the end of our fifth year as a charity – they say that time flies when you're enjoying yourself and, despite the difficulties that have arisen over the past twelve months, we have been able to celebrate some wonderful progress.

The Mothers Of The Forest women's empowerment group in Boré goes from strength to strength and as this financial year ticks into the next, we will be welcoming another branch (excuse the pun!) based on Rusinga Island.

Our colleagues in Kenya continue their outstanding work in (frequently) very challenging circumstances. Eva Jefa (facilitator of the Mothers of The Forest) and her assistant Esther Kombe have continued to disseminate information about permaculture growing methods to the community, who have been able to observe the benefits on Eva's shamba. Eva and Esther were also able to lead an education programme for charcoal burners, to help them understand the importance of protecting the forest, why charcoal burning is detrimental to the environment both locally and globally, and to explore other potential ways of making a living. This programme was requested by members of the community after Eva mentioned it as an idea.

Here in the UK our phenomenal team pours in energy, love and countless hours to help in a multitude of ways, and the support of our corporate partners, members and donors has been so generous, allowing us to expand our work, get more trees in the ground and reach out to more people.

Some of our team represented Word Forest at COP 26 in Glasgow, attending many interesting talks and discussions and running a screening of the documentary #TreesAreTheKey at one of the fringe venues. We were fortunate to be included in the Hot Poets project, a collaboration between poets, NGOs and scientists – the poem written for us by the amazing Zena Edwards just blew us away. Our online Trees Are The Key Awareness Week provided a springboard for the launch of our new, free learning platform.

We have also been fortunate enough to welcome a new Special Adviser, Jo Lawrance, who brings invaluable specialist knowledge of governmental policy and international relations.

I end this year with immense gratitude to everyone who supports Word Forest in any way, shape or form; you have helped us continue to grow like the trees in Kenya and that gives me hope for the future. Thank you!

Meteorologically Speaking

By Clare Nasir

Clare Nasir is Word Forest's Patron, a meteorologist, weather forecaster, author and TV presenter.

Heat has intensified early across the Northern Hemisphere this year and yet again, the consequences as a result have made headline news across the planet.

One hundred million people have been affected by heatwaves in the USA. Life-threatening temperatures have produced devastating wildfires, many of which continue to rage across Spain, whilst in the Norwegian Arctic, thermometers have registered the unthinkable temperature of 30°C.

Further east, the seasonal rains have ended 22 days early in Japan and in recent days, you may have noticed the news reporting they've been replaced by record-breaking temperatures and the worst heatwave in Japan's history. They've seen the hottest temperature since records began in 1875, 40.2 °C. Prime Minister Fumio Kishida has asked people to ration air conditioning in order to conserve their limited electricity supplies.

Drawing our focus to Africa for a moment, lest we forget the 140 million people crippled by the worst drought in 40 years over the Horn of Africa that has resulted in child marriages doubling in the last year.

Thank goodness for Word Forest. They're tackling these weather extremes and resulting social issues head on by planting fast growing trees in the tropics and supporting the communities who plant and tend them. It's a solution that Mother Nature would surely endorse. It's simple, there are no wires or cables required for trees to start drawing down and locking in CO2 from the atmosphere and with your continued support, it will continue to give us all hope for the future.

There was a snippet of news announced on June 30th that I'd really like to draw your attention to. The World Meteorological Office has just launched a new finance mechanism to strengthen weather and climate observations.

Why is this important?

Observational weather data, such as past temperature, humidity, wind, underpins our understanding of future weather. Across Europe, North America and some parts of Asia the catalogue of past meteorological information is comprehensive, with some data sets going back to the 1800's – when ingested into supercomputers, detailed climate trends are revealed. This in turn informs on how to protect communities from future extreme weather.

Past weather records don't exist in every part of the world - many regions, including much of Africa, lack this crucial ingredient.

The new Systematic Observation Financing Facility, SOFF, launched on the 30th June, is readdressing this imbalance.

It's an international response to climate change that provides the tools to fill the data gaps. The gaps that affect our capacity to predict and adapt to extreme weather events such as floods, droughts and heatwaves.

How does it work?

The SOFF trans-disciplinary teams have addressed not only the data issue but also long-term local support to a global problem.

The objective of SOFF is to support Small Island Developing States (SIDS) and LDCs (least developed countries) through the provision of grant financing and technical assistance for the sustained collection and international exchange of surface-based weather and climate observations according to the internationally agreed Global Basic Observing Network (GBON) and to help other developing countries in assessing how to meet the GBON requirements.

In other words – a practical fund of big cash that invests and supports local data hubs, that will provide continual environmental measurements, in the air, in the ground, in water - lakes, rivers, shorelines. A proper data-fest. In turn this information will be utilised in the most sophisticated climate models to gain strong insights into future – local – risk.

And I think there's more...

I joined the UK Met Office in the early 1990's and my first task was observing the weather; I reported on cloud type, daily rainfall total, max and min temperatures. Many of the meteorologists and climatologists at the Met Office today had a similar start to their careers. It's a subtle yet powerful way to feel and understand the rhythms of our atmosphere, creating a strong, earthed based anchor to any role in weather and climate.

So my final thought, this fresh initiative has the potential to do so much more - to inspire, support and develop the careers of young minds in small towns and villages living on the frontline of climate change. Give them the opportunity and resources – and they become instrumental in their own communities as well as part of our global environmental effort to rebalance Earth's increasingly skewed rhythms.

It's time to up the game

Earlier this year, I was proud to represent Word Forest on the BBC's Catchpoint, a Q&A game show hosted by Paddy McGuinness. I'm continually looking for new ways to raise Word Forest's flag and we *all* need to do that to help them reach their goal of reforesting Kenya. It sounds enormously ambitious but that's what we have to be these days. This is perhaps the biggest challenge mankind has ever faced.

Meteorologically speaking, Word Forest could really do with a fair wind blowing behind it to catch the eyes of as many new supporters and Corporate Partners as possible. Global warming is something we're all going to experience to varying degrees. If we help Word Forest get those all important trees planted, perhaps we will be able to stop the degrees from rising after all.

More Trees or a Technological Wheeze?

By Professor Bill McGuire

Bill McGuire is Word Forest's Special Scientific Advisor and Professor Emeritus of Geophysical and Climate Hazards at UCL. He was a contributor to the 2012 IPCC SREX report on climate change and extreme events.

When you get down to the nitty-gritty, there are just two ways to cool the planet; either suck carbon from the atmosphere or block out the sun so that less of its heat makes it through to the surface. In the case of the former, it has never been clearer that trees are the key. Unsurprisingly, that's also the name of Word Forest's documentary narrated by Kate Winslet and it's what Word Forest believes through and through.

Sucking carbon dioxide from the atmosphere at a prodigious rate and locking it up in wood, trees play a massive role in keeping atmospheric carbon levels far lower than they would otherwise be. If we want to make a serious dent in carbon emissions, one of the most obvious ways forward is to plant more trees and lots of them - precisely what Word Forest has spent the last 5 years doing. Their Team are dedicatedly locked on to an ambitious goal of reforesting Kenya, planting as many fast growing trees as it can. But more than this, they know what the secret ingredient is to ensuring those trees reach maturity. It's working closely with Kenyan communities to listen to what they need, to facilitate education, build schools and support women's empowerment. As one of our Corporate Partners, Oaklin Consulting, says: "Word Forest has created a virtuous circle of positive action".

There is absolutely no point in afforestation however if there is no-one around to keep an eye on those volatile saplings, as they strive to get a foothold in the soil. Nothing is more critical, therefore, than looking after the tree planting communities across Kenya, so they can do a great job of nurturing those trees to maturity.

Such schemes operating on a global scale have the potential to transform the way we tackle the climate emergency, while at the same time the commodities from the forests can actively reduce poverty and hunger too. As time goes on, expanding such initiatives in the tropics, where trees grow up to 10 times faster than anywhere else on the planet, will become ever more crucial to our survival.

As well as targeting natural solutions like tree planting to combat global heating (which are essentially relatively straightforward to facilitate) there is also a growing interest in using technology to bring temperatures under control. Intentionally messing around with an already broken climate is a can of worms that we really don't want to open but this isn't stopping those itching to block out the power of the sun.

Moves to tackle global heating by reducing the level of incoming solar radiation constitute nothing more than risky experiments that seek to 'fix' the mess we have already made of our once stable climate. But solar radiation management (SRM) does nothing to reduce the level of carbon dioxide in the atmosphere and as such, it is simply focused on treating a symptom, rather than tackling the cause

of global heating. Many of those in thrall to the idea of SRM are adamant that there are no risks and they tout computer models that claim to show no adverse effects on the Earth's environment. My take is that such unfounded optimism is naïve in the extreme and nothing more than scientific hubris of the worst kind.

The truth is that SRM is nothing new. In fact, for as long as our planet has been around, nature has been modulating how much of the sun's output reaches the Earth's surface, often with major consequences for the climate that would cause mayhem for global society and the economy if they happened today.

Any natural phenomenon big enough to load the atmosphere with sunlight-blocking material will do the job – the principal culprits being asteroid and comet impacts and very large volcanic explosions or clusters of smaller volcanic eruptions. Impact events of a kilometre or more in size will load the atmosphere with dust, leading to a fall in global temperatures known as a cosmic winter. Exceptional volcanic outbursts have the same effect but this time the cooling that follows – known as volcanic winter – is a consequence of the immense volumes of sulphur dioxide gas pumped into the atmosphere. The gas mixes with water vapour to form a veil of sulphuric acid aerosols in the stratosphere, which is effective at blocking incoming solar radiation.

The frequency of impact events large enough to cause a significant fall in global temperatures is low, and the return period of a 1-km wide asteroid strike is at least half a million years, probably longer. Volcanic events capable of bringing about significant global cooling are, however, far more common.

Volcanic super-eruptions (defined on the basis that they eject at least 1,000 cubic kilometres of ash, rock and lava) have an average return period as low as 50,000 years. Plus, they have the potential to bring about a sudden and sustained drawdown in global temperatures. Following the colossal eruption of Toba (Sumatra, Indonesia) around 74,000 years ago – arguably the most catastrophic natural event in the last 2.5 million years – the global temperature fell by somewhere between 3.9°C and 9°C in response to the expulsion into the atmosphere of up to 2,000 million tonnes of sulphur dioxide. The period of significant cooling lasted for several years and may have driven a considerable increase in snow and ice cover.

Smaller, climate-perturbing, volcanic events may have return periods of just a century or two, perhaps even less. Most relevant to us is the 1815 eruption of Tambora (Sumbawa, Indonesia), which led to the so-called year without a summer in 1816. A global average temperature fall of just 0.7°C had a major impact on weather patterns, particularly in the northern hemisphere, resulting in one of coldest ever European summers. Widespread crop failures across Europe and eastern North America resulted in famine and the last, great, subsistence crisis in the western world.

Volcanic loading of the atmosphere also had a major regional impact a few decades earlier in 1783 and 1784. This time, the culprit was the long-lived Laki lava eruption in Iceland, which generated a sulphurous cloud that drifted across Europe. The insulating effect of the volcanic haze resulted in blistering summer temperatures in 1783 and very poor air quality. In contrast, the following winter was unusually severe in both Europe and eastern North America, resulting in at least 8,000 excess deaths in the UK alone. Further afield the eruption has been

implicated in the weakening of both the African and South Asian monsoons, in the former case leading to reduced flow of the Nile and major famine in Egypt.

The key take-away from all this is that atmospheric loading comes with serious consequences. Nature's solar radiation management has invariably had knock-on effects on the world's weather patterns and it is unreasonably optimistic to think that comparable measures taken by humankind would be any different.

The idea that mimicking a large volcanic eruption by maintaining, year-on-year, significant levels of sun-blocking materials in the stratosphere would have no deleterious effects beggars belief and it is telling that eminent climatologist, Alan Robock, has listed 28 very good reasons why SRM is not a great idea.

The bottom line is this: global heating techno-fixes such as SRM are doubly dangerous. Not only are they risky and/or extortionately expensive, energy intensive and environmentally damaging but their promotion as 'solutions', acts to turn hearts and minds away from the desperately urgent task of slashing emissions as rapidly as possible. We can perfectly well do that right now and continue to mitigate their lasting effects with well managed, tree planting projects near the equator that have a raft of humanitarian support initiatives stitched into them, such as those being implemented by Word Forest.

Without concomitant reductions in emissions, SRM and other climate 'fixes' will only store up problems for the future but there is no reason to think that this will happen. Indeed, it is more likely that, instead of being used as a temporary 'sticking plaster', any climate engineering scheme adopted will be hijacked as an excuse to enable business as usual to continue and free market capitalism to flourish. It's no surprise to learn that technological solutions such as SRM are beloved of both fossil fuel corporations and billionaires.

To conclude: we have messed with our planet's climate quite enough thank you. Let's make sure that the SRM can of worms is one that stays well and truly closed. Word Forest's ambitious and equitable bottom-up blueprint for doing business differently to counter our planet's ails is needed more than ever before. Their inevitable scale up to becoming a multi-million pound environmental and education charity won't come soon enough.

Bill's most recent novel, <u>Skyseed</u>, is an eco-thriller about climate engineering gone wrong. His new book, <u>Hothouse Earth: an Inhabitant's Guide</u> (as featured on his LinkedIn profile) will be out in August 2022. <u>Click here</u> to find a local independent bookshop near you to place your orders for these and Bill's other works. <u>New website coming soon</u>.

Thoughts from Bill

"As global heating accelerates, and serious climate breakdown becomes inevitable, it has never been more important to listen to what those in the scientific community are saying about the many problems heading our way in the coming decades. In the - frankly inexcusable - absence of any public information

campaign, I urge everyone to follow the excellent climate coverage online at $\underline{\text{The}}$ $\underline{\text{Guardian}}$ and the $\underline{\text{BBC}}$."

"There are also plenty of other good climate change online sources out there, including <u>NASA's Global Climate Change</u> site and Real Climate, climate science from climate scientists."

5 Headline Stories We've Read Today:

- 1. Italy Declares State of Emergency in Drought-hit Northern Regions
- 2. Spain and Portugal Suffering Driest Climate for 1,200 Years
- 3. Events like Italian Glacier Collapse Likely to Increase as Planet Heats
- 4. Unseasonable Heat to Hit Parts of Canada and China This Week
- 5. 'Every Year it Gets Worse': on the frontline of the climate crisis in Bangladesh

5 Headline Stories We'd Love to Read Tomorrow:

- 1. Kenya Rejoices as Canopy Cover Across the Country Reaches 50%
- 2. UK Corporation Tax to Include 1% Obligatory Support for Environmental Charities to Reforest Sub-Saharan Africa
- 3. Permaculture, Organic Growing and Composting to Feature in New Curriculum
- 4. Women's Empowerment Groups Across Kenya Inspire Neighbouring Countries to Initiate the Same
- 5. Temperatures in the Tropical Regions Finally Show Signs of Stabilisation as Reforestation Efforts Begin to Pay Off

CEO's Report

Tracey West: CEO and Fundraiser

Our Devon based international reforestation charity, Word Forest, is blessed to have Professor Bill McGuire as our Special Scientific Advisor and senior Met Office meteorologist and weather presenter, Clare Nasir, as one of our Patrons. These two alone are thoroughly respected heavyweights in terms of predicting what's heading our way climatically and meteorologically.

Part of my job involves - to the best of my ability - coming up with ways to anticipate and mitigate what may well follow, societally and environmentally. It's worthy of note that Bill and Clare lend their full elbow to our reforestation strategy and supportive humanitarian initiatives.

Word Forest is 5 years old and remains dedicatedly focused on raising funds to plant trees in Kenya that grow up to 10 times faster than anywhere else on the planet. We favour food-bearing varieties that alleviate some of the pressures of malnutrition and starvation for humans, and also help to address the decline in wildlife.

The CO_2 drawdown of the trees you enable us to plant is vast and by definition, that makes the tree planting communities of Kenya some of the most important people in the world right now. En masse tree planting in the tropics is relatively inexpensive to secure.

We've kept our price of £2.50 (per planted sapling nurtured into a mature tree) the same since we started back in 2017. We remain shocked to the core at the deeply disturbing rise of organisations who claim they can also get a tree planted for a handful of pennies or cents.

Having done it myself - and not to any large degree, I confess - I can tell you that the human fuel required to plant a tree properly in Kenya, is pretty substantial. You can't just heel in a sapling over there, that's impossible. Holes have to be dug with short-handled hand tools - not shiny, sharp spades - in very tightly-packed, hostile, hard soil, ideally 60cms/2ft wide by 60cms/2ft deep. That's what's needed if a young sapling is to stand any chance of setting its roots down and finding some moisture.

It also needs an efficient coverage of mulch: grasses, maize stalks, beanstalks, banana leaves and other such biodegradable materials. This reduces precious water loss from the blistering heat and hot winds. It also minimises competition from weeds and improves the soil structure too. All of those materials need to be gathered and transported to the sapling on foot - that takes additional energy and effort.

Finally, the vulnerable sapling needs regular watering and maintenance in the early months. Our friend from Nairobi, Cyprian Ogoti, is a devoted tree planter and he states in our documentary, #TreesAreTheKey narrated by Kate Winslet: "You wouldn't have a baby and leave it in a corner to care for itself." It's the same with saplings, they need attention, time and human effort. Word Forest has always recognised that, it's why we ask for a donation of £2.50 per tree.

When you make an environmental investment with our charity, you get way more than you bargained for. We break the £2.50 into smaller pockets that plant and care for the sapling. We also shave a little off for one of our humanitarian support initiatives: building a school, facilitating education on anything from ABC123, environmental education or permaculture lessons, or maybe providing a nutritious meal with fruit and fresh water for the women that attend our Mothers of the Forest women's empowerment meetings twice a month.

The list of things we're doing (and aiming to expand) to make the lives of tree planters a bit easier, is getting longer. Despite having a ridiculous array of daily challenges, they continue to work incredibly hard to help the planet steady itself by planting and caring for trees.

Our raft of simple initiatives to help Kenyans cope with the wide ranging symptoms of global heating are ambitious. The news about them has created a buzz which has reached the very edges of national government.

Across Kenya, Word Forest is regarded as a well respected organisation that sticks to its word. We're pioneering, we set a high bar and there's a queue of people who want to work with us because we wholeheartedly care about the Kenyan people. We continue to place an equal priority on their welfare and the trees that need planting.

Word Forest knows the value of the small details and over the last year, we've been thrilled as new corporate partners have joined us who share those values. It is evident that trees in the tropics have phenomenal ability as a serious mitigator of global heating, yet the power of them remains largely untapped by the world's governments who claim they're behind plans for a Net Zero world.

The trees we enable the planting of, just a handful of degrees south of the equator, are perfectly placed to be incredibly efficient at alleviating climate breakdown. With good management, they're also capable of tackling hunger and poverty head on too.

The metrics of their all-round efficacy are far greater than from any tree planting project we could initiate in the UK. This absolutely highlights, bolds and underlines the critical imperative to protect mature tree stock in the UK and across the planet.

I'd like to take a moment to commend all of our amazing volunteers, corporate partners and supporters for their belief in what we're doing. They also toil relentlessly to raise awareness of the absolute necessity to elevate our shared existential problem to a more prominent place on everyone's list.

Smaller environmental charities like Word Forest need seats and a voice at international forestry and climate-based round tables. There's so much knowledge we could impart about the greatest challenges we've faced and our successes too.

I've spent 2 years actively seeking an invitation to participate in discussions with the Sustainable Markets Initiative, responsible for the ambitious Terra Carta Charter but progress has been slow - I shall keep trying nonetheless. We don't want to be lone fish, we want to share what we've learned and to inspire the countless millions who need to be on board with joined up, urgent eco-thinking and actions.

We all need to accept more responsibility for encouraging our employers, our education establishments and our councils to stitch Net Zero principles into the fibre of their being. I long for the day when blusterous over-promise, under-delivery and delirious, perilous addiction to squeezing the Earth for every drop of unsustainable energy, are gone.

In the news, we've all seen shocking, unprecedented environmental disasters be overshadowed by other shocking, unprecedented environmental disasters. Just a moment ago, Weather Tracker's Australian News reported that over 80,000 people have been forcibly evacuated from their homes by rising flood waters in Sydney and the surrounding areas. Incidentally, it's the third time this year that these regions have been devastated by floods. La Niña is reportedly the major driver and the defining characteristics are in keeping with climate breakdown predictions of enhanced intensity of seasonal global rainfall events.

In Coast Province, Kenya back in 2018, our co-founder Simon and I experienced the start of the long rains coming a whole month early. They were violent, relentless, their arrival was horrifically swift and everyone was unprepared. Even the meteorological reports on the radio stated: "Don't worry, it's not the long rains coming early". As we continued our irriguous journey to Nairobi, within a very short space of time they were eating their words. In the Boré region where our main planting projects were centred at that time, those rains went on to displace 20,000 people from their mud hut homes - that's a quarter the number of those fleeing theirs in Sydney, today.

During our Monitoring and Evaluation visit back to Kenya in the spring of the following year, we saw many of the 20,000 still living in makeshift UN tents some 12 months on, their entire homes, scant possessions, livelihoods and hopes having been completely washed away.

The residents of Sydney and Boré will undoubtedly feel the pain of a wrathful, barbed lash from Mother Nature again, it's just a matter of stormy time.

There needs to be far more unity amongst global leaders to work together to solve our existential crisis - the safety of their homelands and their own people is quite literally at stake.

Please note: according to the scientific data we're gleaning, even phenomenally large tropical tree planting initiatives are likely only to result in the world suffering fewer extreme weather events and subsequent deaths - it will not eliminate them. This makes the work Word Forest is doing even more important than ever before. No amount of tropical tree planting can reel time back to a period where we see only occasional instances of deadly, climate-related events.

My door is always open for conversations with new collaborators and most especially new funders. Together, we'll enable Word Forest's agenda to hurtle forward (in a sustainably powered vehicle, of course).

I send kind regards to all and I conclude with reiterated thanks to everyone working tirelessly to make our planet well.

Yours, in service to our planet, its people and wildlife

Tracey West FRSA CEO and Fundraiser

And Finally...

We have released two new tools from the box this year. Our Educational Learning Platform (ELP) and the Sports Climate Alliance.

We're hoping our ELP, which is being championed by amazing volunteer Lyndsey Selleck, will become a tool that helps people become better all round environmentalists. We're also aiming for it to be an easily accessible learning resource for our beneficiaries in Kenya. Why not take a look at Learning.WordForest.org and sink your teeth into our first few courses.

Secondly, the <u>Sports Climate Alliance</u>, headed up by another of our amazing volunteers, Connor McDonald, is in its very early days. It is an incredibly exciting initiative that we believe will help Word Forest secure a worthy place on the map of mass participation sport fundraising events. Keep an eye on <u>SCA.earth</u> to watch our winning flag unfurl.