**Scotland Malawi Partnership (SMP) Renewable Energy Forum**

3rd December 2019

Edinburgh City Chambers

**Minutes**

Chair: Nicholas Gubbins, Community Energy Scotland

William Kamkwamba

David Hope-Jones, SMP

Donald Speirs, Dulas

Ciara Commins, SCIAF

Damien Frame, University of Strathclyde

Prof Stuart Galloway, University of Strathclyde

Lauren Opstad, Oxfam

Dr Joel Chaney, CREATIVenergie

Ruth Milliken, Scotland Lights Up Malawi

Nathaniel Chalamanda, Scottish Environment Protection Agency (SEPA)

Charlie Goodwin-Smith, Scottish Government

Alphaeus Ngonga

Bob Garrow, R.S. Garrow Ltd

Craig Docking, SMP

Douglas Coulter, SMP

Dr Colin Anderson, University of Edinburgh

Eilidh Watson, Glasgow Caledonian University

Gillian Hurding, Scottish Power Energy

Prof Heather Cubie, University of Edinburgh

Ian Dunn, SCIAF

Kevin Simpson, Malawi Fruits

Lillian Nseula, University of Strathclyde

Mairi Dorward, University of Edinburgh

Mick James

Nigel Harper, LUV+

Penny George

Dr Rachel Phillips, SMP Board Member

Rod Penn, Photographer

Sandra Picken, LTS International

Stuart Brown, SMP

Tasha Boardman, Scottish Government

On the 3rd of December 2019, industry leaders and practitioners from the renewable energy sector met to discuss the work that is happening between Scotland and Malawi. This was the second meeting of the Renewable Energy Forum and featured special guest William Kamkwamba, subject of the award-winning book and global Netflix feature film *The Boy Who Harnessed the Wind*.

Scotland Malawi Partnership CEO, David Hope-Jones welcomed members and introduced the Chair, Nicholas Gubbins (Community Energy Scotland CEO and SMP Board Member). All members were then given the opportunity to introduce themselves in a roundtable format, ending with William Kamkwamba.

William Kamkwamba’s introduction was followed by a trailer for the Netflix film, [The Boy Who Harnessed the Wind](https://www.youtube.com/watch?v=nPkr9HmglG0) which is based on William’s book of the same name. Nicholas noted that it must have been strange for William to watch, as the story portrays significant events from his own life. William agreed that it was a unique feeling, and commended the filmmakers for knowing which elements from the book to retain, in order for it to work effectively as a feature film.

William then gave his keynote address, telling the real-life events of the story and beyond. William grew up in Kasungu where, after his village was struck by drought, he used his self-taught scientific knowledge to build a working windmill, which he used to power his family’s home. After gaining international attention for his work, he has gone on to work on a number of projects, chief amongst which is the founding of his NGO, [Moving Windmills Project](https://movingwindmills.org/). Moving Windmills was founded in 2008 and pursues economic development and education projects in the rural areas of Malawi. They are currently working on an Innovation Centre, where young people will connect with and learn from professionals so that they can create new solutions for their communities. While talent can be found everywhere, not everyone has the opportunity to put these talents to use. William wants to give talented young people an environment where they can develop. William concluded by expressing how excited he was to share his story and learn about the work happening between Scotland and Malawi. His keynote speech was followed by a Q&A session.

Q: What are William’s ambitions in the field of renewable energy?

A: William’s main focus is on two different types of project: providing micropower energy solutions in areas without much resource and designing a simple windkit that people can build themselves in their own community.

Q: Is wind power suitable everywhere in Malawi and has there been cost benefit analysis in terms of wind and solar energy versus larger scale energy solutions?

A: William explained that wind speed is greater along lakeshore areas and effectiveness of wind power does depend on location and what you are looking to build. It was mentioned that Damien Frame has knowledge of recent studies concerning the latter part of this question, and Damien offered to circulate links to these studies after the meeting.

Q: How do you scale up the Moving Windmills Innovation Center, and what barriers are there?

A: William felt that not many schools in Malawi have a strong focus on science. To counteract this, he suggested that teaching children science in a competition-like format will help inspire and connect them. He also emphasised the importance of bringing science back to the classroom, and having a teacher in every school to champion this.

After a short break, Nicholas welcomed everyone back and discussed the purpose of the Forum. The Forum was created to bring together as many people and organisations as possible with a link to Malawi and involvement in renewable energy projects, so that they can learn from each other’s experience and improve their collective engagement with Malawi. While this was only the second meeting, the urgency of this is quite profound due to the severe state of climate change. Scotland has an obligation to help low carbon and renewable energy become a solution for those in Malawi, as a large number of people still do not have access to grid power or electricity. A major goal of the Forum is to create a directory of all organisations working in this field to improve outreach and help these organisations to connect and work together.

This was followed by the Scotland-Malawi Renewables Showcase, where seven speakers were each given five minutes to talk about the work they or their organisations are doing.

Donald Speirs is Business Development Manager at [Dulas](https://www.dulas.org.uk/) an organisation committed to providing renewable energy equipment and consultants. While primarily based in Scotland and Wales, they have done a lot of work overseas, including production of solar refrigeration devices for medical facilities in Africa. Donald was keen to emphasise that solar power is a game-changer; the technology exists and is proven to work. The main obstacles are the logistics and money involved, but this is being tackled.

Ciara Commins is Programme Manager at [SCIAF](https://www.sciaf.org.uk/) who operate the Climate Challenge Programme Malawi. Funded by the Scottish Government’s [Climate Justice Fund](https://www.gov.scot/policies/international-development/climate-justice-fund/) Malawi, this programme aims to improve access to food, water and energy for tens of thousands of people in Southern Malawi facing a rapidly changing climate. After identifying the areas to work in, SCIAF worked closely with the districts to find the communities that would most benefit. These communities were then encouraged to discuss their challenges, needs and visions for the future in groups on a daily basis, to identify the best way forward. It was important that the process made use of local methods, sustainable agriculture techniques and natural pest management. Efforts were also undertaken to empower the local people, particularly women, educating them on their rights, laws and policies so that they can better support each other. Ciara then introduced an example of the work being done, where a village had sourced solar panels from a local partner and had these installed by a local business. These panels now power a barber shop, study hall, phone charging centre and shop. It is hoped that the village will eventually expand to become a trading centre.

Stuart Galloway is a Professor of Electronic and Electrical Engineering at the [University of Strathclyde](https://www.strath.ac.uk/research/subjects/electronicelectricalengineering/instituteforenergyenvironment/). He is currently involved with three projects relating to renewable energy in Malawi, all funded by the Scottish Government. The first project is to introduce District Energy Officers, people with knowledge and skills in renewable energy, to act as a bridge between organisations running projects and the local communities who will be affected. The second project is providing solar kiosks to supply power to small businesses in a sustainable fashion. The third project is to generate a larger scale inter-connected grid, and is expected to last four years. A fourth project, funded by DFID, looks to displace the use of biomass for cooking, replacing this with electricity. This project is currently at the end of its first year, and a range of cookers is being prototyped.

Lauren Opstad is UK Partnerships Advisor at [Oxfam](https://www.oxfam.org.uk/) who, from 2015 to 2018, worked on a project between Scotland and Malawi to improve farmers’ livelihood by addressing the inter-related challenges of economic insecurity and access to energy. The drought that began in 2015 highlighted many of these issues and the value that renewable energy can bring. Key achievements of the project included 2,860 farmers receiving increased income and improved food security as a result of engaging in solar power irrigation, value addition or enterprise development. The project also successfully influenced development of the National Energy Policy providing regulation and promotion of renewable energy. Lauren included a case study from Alena, a Malawian farmer who was able to purchase supplies and equipment and send her children to school thanks to solar powered irrigation farming. Another case study came from Kasekese Co-Op, who produce peanut butter using solar powered value addition technologies.

Dr Joel Chaney is founder of CREATIVenergie <https://creativenergie.co.uk/> whose aim is to develop renewable energy solutions in the Global South through partnerships, training and an open source approach. Joel recounted an instance of the organisation’s work in Tanzania, where a group of locals were trained on lower cost biogas systems. This lead to the creation of a biogas company, which in turn helped to set up a dairy that produces cheese. The individuals involved are now using their experience to mentor others. CREATIVenergie is now looking at different ways of producing biogas and is analyzing data on the failure of biogas plants. Part of this was leading a consortium to develop the Smart Biogas Network, a monitoring system that predicts and flags biogas digester breakdowns. Other technologies they have developed include a simple to make water pump and a kit containing everything needed to set up a charging station and hub.

Ruth Milliken is Campaign Coordinator at [Scotland Lights Up Malawi](https://www.keepscotlandbeautiful.org/media/1557565/scot-lights-up-malawi-final-report-final-low-res-170117.pdf), the Scottish representatives for [SolarAid](https://solar-aid.org/). SolarAid is an international development charity working to tackle poverty and climate change by providing access to solar lights in the poorest and most remote rural communities. Many of these communities rely on poor sources of energy to facilitate light, such as candles and gas, so SolarAid has developed the world’s most affordable solar light. Over the past 11 years, this has reached 1.3 million people in Malawi. Benefits of using this light include 10% savings of household income, over 1,000 hours of extra study time for children, over half the household experiencing better health and the reduction of CO2 emissions. Once solar lights are introduced to a community, word quickly spreads about the benefits and demand increases. An ecosystem of sales agents can then be built, creating jobs and providing long-term access to a variety of solar lights. While [the International Energy Agency](https://www.iea.org/) estimates that by 2030, 600 million people in Africa will still be living without electricity, SolarAid has set itself the mission of no one left in the dark by 2030. They hope to achieve this by developing new innovations in order to reach the poorest families. Project Switch and Light Libraries allow families to rent or trial solar lights, further reducing the cost barrier. A new healthcare programme is also being launched, with an aim to ensure that no expecting mother should have to give birth in darkness.

Nathaniel Chalamanda is a Specialist at the Scottish Environment Protection Agency [SEPA](https://www.sepa.org.uk/) and a Malawian living in Scotland. During a recent visit to Malawi, he spent a lot of time walking rather than driving, which gave him time to notice a large amount of discarded waste that had not been properly disposed of. This included a pile of dirty nappies left by the side of the road. As nappies are not easily affordable in Malawi, this would suggest that someone with a large amount of disposable income was dumping these somewhere so that it was no longer their problem. Other examples included plastic waste and piles of leaves that would likely be burned, and tyres being stripped and burned in order to extract the wire inside. He noticed people washing and drawing water from a river where waste is regularly dumped, and was concerned about the effects this may have on their health. There is also demand for charcoal, as many people still burn this. Nathaniel then talked about his uncle, who bought solar panels and uses these to play music from his house. This made Nathaniel wonder why so few people have solar panels when they are more readily available than one might think. In summary, he felt that waste management is intrinsically linked to renewable energy issue and this should be more recognised. He also suggested that more work should be done to communicate with Malawians with relevant skills and expertise. He noted that there are plenty of people out there who could help, but have not been approached and are unaware of the work that is happening. Nathaniel suggested that he could act as a conduit to help get these people involved.

Charlie Goodwin-Smith, [Climate Justice Fund](https://www.gov.scot/policies/international-development/climate-justice-fund/) Manager at the Scottish Government’s, shared information on what the Scottish Government’s approach was to funding renewable energy projects such as those above. While there were no new announcements, Charlie pointed out that Malawi is a country that is strongly impacted by the effects of climate change but is not the source, and so other countries do need to take responsibility for the harm they are causing to the environment and take steps to fix this. Similarly, climate justice has an unequal impact across different communities and age groups. He finished by emphasising that commitment to fighting climate change cannot be separated from a commitment to international development.

Damien Frame, Research Fellow in Electronic and Electrical Engineering at the [University of Strathclyde](https://www.strath.ac.uk/research/subjects/electronicelectricalengineering/instituteforenergyenvironment/), shared updates on how we are actively fostering alignment with the Malawi Renewable Energy Strategy. He noted that the turnaround for the launch of the National Energy Policy was relatively quick, with many people contributing and [the Malawi Renewable Energy Strategy](https://www.meramalawi.mw/index.php/resource-center/other-regulatory-tools/download/20-other-regulatory-tools/61-malawi-renewable-energy-strategy)  being well-referenced as a supporting document. Key themes that emerged from speeches included improved large scale generation, better structure, the need for energy access in rural areas, alternative solutions and the challenges of biomass. There is a firm commitment to District Energy Officers and support is in place for communities to meet their own needs and priorities. He also highlighted that delivery of energy is not just the responsibility of the department of energy, and small grassroots organisations are an important part of this as well.

There was then a discussion of how the Forum can best support Scottish organisations with Malawi partnerships to invest in renewables. Members commented on the importance of Damien’s update on the National Energy Policy, and felt this was a great step forward. It was suggested that the Forum could become a semi-formal mechanism of feeding into the Renewable Energy Strategy, establishing connections and then ensuring work is directly feeding into the intended targets, with assistance from the Scottish Government and MaSP. It was mentioned that the Forum should also try get lower key projects involved in addition to the larger ones. Nicholas pointed out that this all feeds into the directory that the Forum aims to establish. David Hope-Jones suggested supporting SMP members not already involved with renewable energy to get involved, using William’s story to inspire interest and potentially creating a *William Kamkwamba Challenge*. Lillian Nseula knows from experience that solar energy is effective and should be more widely adopted. She also noted that solar projects are eligible for government subsidies. Rachel Phillips was struck by Nathaniel’s point about using Malawian contacts, and wanted to know how best to approach this. Nathaniel advised that there is always a contact available with expertise in a given subject, but they are not necessarily aware of each other. He does have access to 500-600 alumni from his former university that he could contact to establish a foundation. Penny George raised the point that communities still need continued support once the funding for their project ends. We must think about how to proceed at this point. It was suggested that local solutions may be the best way forward, and it was also worth looking at the innovative work being carried out in many Scottish Communities and taking inspiration from these.

In his closing summary, Nicholas set a goal for the next meeting of bringing back firm proposals for what actions to take next, and again emphasised that the information base must be built as thoroughly as possible. He noted the huge latent interest in Malawi, and advised that we should actively build partnerships with help from MaSP in order to share our collective resource.

Closing reflections were delivered by William Kamkwamba. He said it was great to listen in on this meeting, seeing how we can learn from each other despite everyone coming from different fields. He was excited to speak to everyone after the meeting to learn more about their projects and how he can apply elements to his own. He then discussed how it is important to know who is doing what, so you can build and expand on what has already been achieved, rather than constantly trying to reinvent the wheel.

Nicholas thanked William, the speakers, photographer Rod Penn and all other attendees. The meeting was followed by a final round of networking.