Continuing the strategy implemented upon my joining the Board, of restructuring Pump Aid’s operations and personnel roles, 2012–13 was focused on assessing our organisation’s effectiveness, efficiency and impact. Pump Aid has continued to add to its portfolio of pumps in over 3,200 communities in rural Malawi during the year. In 2012/13 Pump Aid provided clean, safe water to an additional 20,000 people. Over the last three years we have delivered sustainable water, sanitation and hygiene solutions (‘WASH’) to over 1,300 communities serving in excess of 165,000 people in some of the poorest communities in sub-Saharan Africa. Our current portfolio in Malawi provides sustainable water supplies for over 400,000 people daily. The impact of our activities is multi-layered in both saving and changing lives.

Pump Aid continues on its transformational path, from pump builder to an all-encompassing water, sanitation and hygiene delivery specialist. Through 2012 to 2013 our organisation maintained focus on analysing the quality of our delivery and the sustainability of our WASH programmes. We continued to review the performance of our historic pump construction programme in Zimbabwe, where we have served over 5,000 communities, along with our current portfolio in Malawi.

During 2012 in the areas of quantitative and qualitative evaluation we continued to analyse and assess the impact of the programme. The first phase of this process is complete and confirmed the high performance of our pump technology, achieving excellent ratings for water quality and functionality standards. The second phase of this analysis is underway with the launch of a number of studies, undertaken jointly with UK-based Cranfield University and Mzuzu University in Malawi.

We have initiated the introduction of new mobile technology for greater speed and accuracy of data collection; specifically to significantly enhance our evidence base and to offer superior reporting to our donors.

In the area of sustainability we completed our first pump construction and maintenance programme designed for local artisans in Zimbabwe. We were delighted to receive the Pan-African Award for Entrepreneurship in Education (Educating Africa 2012) for this work.

None of our achievements would be possible without the support of our Partners and Donors. Every one of whom deserve special thanks. I would however like to particularly thank James Cain and his team at Thirsty Planet, who have been supporting Pump Aid for over six years and whose continued support remains invaluable to our organisation in the vital area of unrestricted funding. In the area of restricted funding thank you too to Scott Harrison and his team at charity: water in New York, their support during the year has changed the lives of thousands.

To date we have provided over 10% of the entire rural water supply in both Zimbabwe and Malawi nationally combined. We are the first to say that whilst our organisation has achieved a great deal over the years, we have only just begun. We are resolute in our belief that we can continue to play a major role in eliminating water poverty from rural Malawi completely.

In 2013, for the first time in our history, Pump Aid was awarded a three-year grant from the UK Government’s Department for International Development (DFID). During this period we have committed to rolling out our pumps to a minimum 1,500 communities, providing clean, safe water to 150,000 people, of which 60% are under the age of 20.

This DFID grant puts the quality of our management team, led by Gwen Vaughan and our dedicated teams both in the UK and Malawi, into context. Of 114 competing proposals for the DFID funding for the period, just 21 were successful. Pump Aid has undertaken an enormous amount of work behind the scenes in improving every aspect of its operations during my tenure. We will strive to continue to do so.

The next year will see many new initiatives across our spectrum of activities and we will continue to evolve as an organisation. We have launched the ‘Pump Aid Patron Programme’ to strengthen our unrestricted funding core and intellectual capital. My sincere thanks to Neil Fox for chairing the Patron Programme, and to Robin Saunders as our first Patron. We look forward to welcoming many more.

To conclude, my special thanks to my fellow Trustees, Ben Nealon OBE, Megan Bingham-Walker and Jeremy Berkoff, whose combined experience, viewpoints and skill sets continue to prove invaluable.

STEFAN ALLESCH-TAYLOR
CHAIRMAN
OUR KEY ACHIEVEMENTS

Delivering clean water to over 1.25 million people in the poorest communities in rural sub-Saharan Africa

Building over 8,500 pumps in as many communities across Malawi, Zimbabwe and Liberia

Developing and refining our own pump technology to match local conditions and evidencing through technical studies the sustainability and quality of our work

Winning a number of awards including:

- Pan-African Award for Entrepreneurship in Education 2012, Educating Africa
- St Andrews Prize for the Environment 2008
- World Bank Development Marketplace Award for Development Innovations 2006
- St Andrews Prize for the Environment 2005

HOW WE WORK

We believe that each pump is at the heart of sustained water and sanitation improvement. Each pump we build has a package of support which addresses all the needs at installation point and for lifetime stewardship. This multi-layered investment leverages greater benefit for the whole community over the long term. It saves and changes lives.

- Relevant Technologies
- Community
- Stewardship
- Entrepreneurship & Capacity Building
- Education & Health
- Evidence & Learning
OUR APPROACH

Our Community
Facilitators teach good sanitation and hygiene through positive messaging and creative workshops.

Appropriate technologies +
community partnership = sustainability

Relevant Technologies

To deliver long-term impact, the best solutions to water and sanitation problems have to be appropriate to local conditions and have a substantial lifespan. The Elephant Pump is a proven simple and effective device and remains at the core of what we offer. It is a symbol of the principles behind any technologies we employ, which need to be:

- Meeting genuine and diverse needs
- Most cost effective to install, maintain and repair
- Preferred local solution
- Reliant on local supply chains and materials
- Affordable by communities
- Repairable by trained local tradesmen
- Self-governable by communities

Our priority is to deliver African and local-based solutions. We avoid technologies that appear to be technologically superior but, in practice, cannot fulfil their promise because performance is dependent on factors (such as cost, availability or complexity) beyond local control.

Our Community

We work directly with communities to understand all their diverse needs and engage them fully from the earliest development stages.

We seek to provide clean water for domestic use and healthier lives as a minimum outcome, but clean water via a pump is just the beginning. Fundamental social changes accompany any new water service and communities need support to embrace and embed those changes. That’s why our role is centred around long-term investment and commitment to the communities we work with.

Each pump has a support package to ensure:

- Pump operational management through community ownership
- Behaviour change and best practice for sanitation and hygiene
- Specific needs are met for a diverse group of people, such as women, those living with HIV, the disabled and small entrepreneurs

Around the world, women spend 200 million hours a day collecting water.
OUR APPROACH

95% pump functionality
Our aim is to achieve and maintain this target within the next three years

Our promise:
We commit to every pump and its community for the long term. We partner 3,200 communities in Malawi today

Entrepreneurship & Capacity Building

Working from the principle that communities want to be self-sufficient, we use pump building to stimulate local economies and create opportunities from which livelihoods can develop.

The journey from existing as a poor community to one that is entrepreneurial is not straightforward and depends heavily on local conditions, however water is a fundamental prerequisite for all aspects of human development and is a great place to start.

We believe that our locally-led approach is the best way to leverage the poorest communities’ resources and encourage self-sufficiency. By providing work and nurturing small business development around pump building, offering specialist training for local artisans, such as builders, metal workers, masons, well diggers, pump installers and manufacturers, we can make a significant impact. All of these skilled workers benefit through developing new skills and gaining new employment. As communities develop they are able to pay for additional water points and sanitation from their own local businesses, making rapid gains without dependency on external donors. Our core philosophy is ‘to help people help themselves’.

Stewardship

The right technologies and community ownership go a long way to ensuring that our projects are sustainable—they keep on delivering impact for years after the initial training and building installation. We know this because we constantly monitor progress.

Our commitment does not end when the pump is built, it continues for the long term. The technologies that we use and the training we provide means that communities are far more likely to be able to keep their pumps running for far longer than other technologies, although there are times when the system breaks down. We are committed to finding out why this happens, and to support the projects that have started to struggle so they can successfully get back up and running.

The support we provide ensures that people can source spare parts and gain support easily, there are trained mechanics in every area where we have worked, and we are tracking the long-term progress of our projects so that we can identify problems early on.

Our core philosophy is ‘to help people help themselves’

Area Mechanics are skilled artisans who we give dedicated training to in repair and pump maintenance

95% pump functionality
Our aim is to achieve and maintain this target within the next three years

Our core philosophy is ‘to help people help themselves’
In Malawi, 1,000 children under five-years-old die from avoidable water-related illnesses each month.

Creating a knowledge base is crucial to being the best in our field.

**Our Approach**

Regular bouts of diarrhea from limited access to school toilet and water facilities leads to poor learning for children.

Access to clean water and sanitation in schools

| Water Facilities | 51% |
| Sanitation Facilities | 45% |


**Education & Health**

Our public facilities programmes deliver access to improved water and sanitation services in education and health centres, plus vital hygiene and sanitation education. We believe that children themselves can be pivotal agents of change both at school and in their own communities, to deeply embed good sanitation and hygiene practice and beliefs.

We know from established research that poor sanitation leads to:

- School absenteeism
- High child mortality rates
- Physical & intellectual disabilities
- Gender inequalities

Clean water and sanitation has a direct positive impact on:

- The most vulnerable attending health centres, including babies and the elderly
- School children who benefit from better access to school and improved health to attend school

**Evidence & Learning**

Understanding how ‘what we do’ affects the impact of our programmes is vital to our future success. Developing our knowledge through the collection of hard evidence means that we can make meaningful improvements, and deliver the most robust and effective programmes possible. As a result of being more accountable and transparent we are engaging partners and donors who share our vision for continuous learning, and increased impact.

We aim to develop a comprehensive knowledge base through an outstanding monitoring and evaluation programme. Working in the field creates a number of challenges which we aim to overcome by:

- Incorporating mobile and internet technology for more accurate data collection
- Taking an action research approach to ensure that we learn about all aspects of our programme and translate those findings to improve our work.

We have many more exciting research projects lined up for the years ahead and are keen to share our insights through open source publishing.

Visit [www.pumpaid.org](http://www.pumpaid.org) or sign up to our newsletter to learn more.
Malawi is one of the least developed countries in the world and ranked 170 out of 186 countries in the United Nations’ Human Development Index. It is a predominately rural country where basic water provision for domestic use is the paramount need. This is the focus of our flagship programme which aims to fulfil the most basic water and sanitation needs on a mass-scale.

Since 2004 we have delivered 3,200 pumps in Malawi and these pumps serve over 400,000 people every day. Our target is to deliver a minimum 1,500 additional pumps by 2016, and to reach one million people by 2018.

• The Mark II pump includes options for use on a borehole, for some terrains a borehole is preferable to a shallow well. We are also exploring hand-drilling technologies as an affordable, local business option.

• Additional pump designs, particularly affordable rope and washer pumps, will be introduced to the programme in the coming months.

Extreme poverty in rural Malawi means that communities are rarely able to raise funds to build pumps. We prioritise communities that have been identified as having the greatest need and invest in areas which lack government intervention and international subsidies.

Our approach is community-centric, which is why we support the establishment of a local Water Point Committee, responsible for site and pump maintenance. Female participation is actively encouraged and our research shows that 90% of these committees have female members, often in key leadership positions including chairperson, vice chairperson and treasurer.

During the year we have been assessing a number of additional technologies for water and sanitation that could enhance our ‘toolkit’ and add value to the programme in the future:

• A wide range of latrine technologies will enhance the sanitation offer; from low cost safe solutions which can be built at no cost by community builders, to improved toilet-block designs for schools and public centres.

• A long development process for an improved version of the Elephant Pump was initiated with the Malawi Institute for Research and Technology Design. We plan to publish the standards for the new ‘Mark II’ as an open source design that can be used by others across the world.
We confirmed that the Elephant Pump provides water comparable to much more expensive pump designs, that users like the pump, and that we can improve functionality and impact through further development of the installation standards (which will be published as the Mark II) and an enhanced community engagement and training programme.

We plan to work on the following objectives:

• Deliver 360 pumps to benefit over 43,000 rural Malawians
• Launch a sanitation programme to improve access to hygienic latrines and reduce health problems associated with faecal contamination
• Introduce hand-washing hygiene education programmes
• Develop a spare part network using District Government, area mechanics and local businesses
• Conduct field research on shallow well water contamination and collaborate with government on water quality testing
• Build new relationships with like-minded Malawian-based organisations and co-ordinate funding efforts
• Drive community participation through teamwork to encourage and improve changes
• Partner with schools to provide water and latrines appropriately designed for menstrual hygiene management, and support teachers to provide hygiene education to their students
• Embed digital data to collect and report via mobile technology in the field
• Increase field knowledge, internal expertise and standards through research and development
• Launch major new programme funded by DFID

Our work in Malawi has impacted hundreds of thousands of lives. Small, remote communities and individual lives have been transformed through access to clean, safe water for the first time. A programme of this scale needs partners and support to achieve its ambitious objective to completely eliminate water poverty in rural Malawi.

FOR MORE INFORMATION AND TO STAY UP-TO-DATE WITH OUR RESEARCH AND THOUGHTS, SIGN UP FOR OUR NEWS UPDATES AT WWW.PUMPAID.ORG OR CONTACT US AT: INFO@PUMPAID.ORG
CASE STUDY

Transforming family life and opportunities
Makulata Limbikani, 37, Saluyavuka Village

For mother, Makulata, the new pump has vastly improved family health for her three children and she has started a small business making bread and growing tomatoes for sale. Access to clean water has given her the opportunity to be almost self-reliant and her new cash income pays for her elder children to attend secondary school for the first time as well as covering the cost of books and uniforms.
Liberia is ranked 174 out of 186 countries in the United Nations’ Human Development Index. Although the long years of civil war are now over, the country has weak infrastructure and capacity, remaining troubled and volatile. 56% of people do not have access to safe sanitation facilities and 26% do not have access to safe water.

From 2009–2012 Pump Aid piloted a project that trained former child soldiers to build Elephant Pumps and Elephant Toilets for Liberian communities, delivering over 100 pumps and 300 Elephant Toilets. In 2012 we evaluated the pilot to assess the functionality and suitability of the technologies and the impact of the programme. The conclusions were as follows:

The Elephant Toilet was appreciated by the beneficiary households, however it is not a solution which we would roll out any further in Liberia at this time, as it requires expensive inputs (cement) and tools (casting moulds) which makes this solution unaffordable for both artisans and households. In the future other lower cost technologies that require no external inputs would be more effective, as the country has adopted a no subsidy Community-Led Total Sanitation policy.

The high rainfall and water table levels in Liberia mean that shallow wells are prone to rapid contamination. None of the pumps built at the start of the pilot were able to reach national water quality standards and required frequent disinfection. Later wells were lined with culvert rings to address these issues, a process which added significant costs to the solution. Our recommendation is that protected boreholes rather than shallow well technologies would be an improvement.

There is far less demand for agricultural (irrigation) water in Liberia than in the other countries where Pump Aid operates because of high annual rainfall levels. To some extent this will limit the potential for self-supply and market-led approaches.

During our pilot, 600+ people were offered the opportunity to be trained to maintain the water points, but only 15% showed interest. We concluded that there is a widespread cultural attitude that initiating agencies should carry the responsibility for projects, which does not align easily with our approach as this requires significant contributions and involvement from the project beneficiaries.

In all over 70 Liberians were trained as builders and a strong team was formed. The stories of the difference that the training and support provided made to the lives of these people were moving; their experiences had clearly been transformative and they were able to see a positive future which differed to their expectations at the start of the programme.

Pump Aid provided the builders not only with technical skills development but also educated staff with business management expertise and start up insight, so that the participants in the pilot were able to go on to develop their own enterprises.

The pilot clearly demonstrated the need and potential for a water sanitation and hygiene programme for Liberia. The country is only now making the shift from dependency on humanitarian funding received in the aftermath of civil war, few donors are yet prepared to invest—the country is still perceived as fragile. As a result, many delivery agencies have pulled out, leaving the situation in Liberia still more urgent. Pump Aid does not currently have any new financial resources for this programme and will continue to review the situation.
Pump Aid originated in Zimbabwe and continues to have a close relationship with the country. Zimbabwe offers a different challenge as conditions are more suited to investment in delivering productive water use.

As a result, we are actively developing a market-led small business solution to rural water poverty. This approach not only helps local people deliver their own water solutions, but improves water supplies, while supporting livelihoods, and enabling the continuation of pump building locally.

The National Action Committee (the NAC), the Zimbabwean body responsible for managing the water, sanitation and hygiene sectors completed an extensive evaluation of the Elephant Pumps in situ. As a result of their recommendations, we took the opportunity to develop a market approach, transferring the learning from our own group of master builders to local artisans, entrepreneurs and community members. In early 2012 we trialled this new approach giving skills-based training to a small group who would then set up small-scale pump-building businesses. This modest pilot showed huge potential.
During the pilot project we accredited six pump builders through on-the-job training, while installing 18 Elephant Pumps for the most vulnerable households in target communities. These projects not only provided 2,000 people with access to an improved water source, but the builders went on to build additional pumps after the project. They were commissioned by the community members themselves, as individual households or as groups of households working together. Within nine months of the initial training, the number of pumps in these communities doubled, reaching additional households with clean water, reducing the distance to the main water source for many households, and, most importantly, providing greater quantities of water that can be used productively. We were delighted to win an award in 2012 from Educating Africa, ‘The Pan-African Award for Entrepreneurship in Education’, for our work in Zimbabwe.

TARGETS 2013–2014

The pilot showed huge potential. We love the possibility of setting a community on a rapid path to its own development. Our funding tends to provide community pumps—water for clusters of households, but we know that a pump for every household is ideal, which is loved by our beneficiaries too. A household pump doesn’t only provide enough clean water to keep the children clean without having to carry water long distances, but it makes possible the development of household gardens, providing food and significant additional income. We calculate that this income should be adequate to pay back a small community-loan within a year or two.

We really want to develop this approach. The advantage of the affordable pumps that we use is that this should be possible. Our aim this year is to raise the resources and interest in this approach so that we can ignite this programme and promote it more widely in Zimbabwe.

CONTACT US AT INFO@PUMPAID.ORG IF YOU OR YOUR ORGANISATION WOULD LIKE TO SUPPORT THIS WORK IN ZIMBABWE OR ELSEWHERE. WE ARE ALSO PLANNING A SIMILAR TRIAL IN MALAWI IN 2014.
DONOR AND PARTNER SUPPORT

DONORS AND PARTNERS

We thank all of our donors for their generosity and support.

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Our major donors in 2012–13

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“The partnership approach taken by both Water Brands and Pump Aid has been paramount to making the relationship so successful. A number of field trips have taken place during the period and the results of Pump Aid's efforts are staggering.”

—James Cain, MD, Water Brands/Thirsty Planet