Foreword

Of the one billion people in the world estimated to have restricted access to safe drinking water, 400 million live in Africa. The urgency of this problem in terms of health and economic progress is recognised by the UN in its Millennium Development Goal 7, Target 10, that aims to halve these numbers by 2015.

Through Diageo’s Water of Life projects going back many years, we have supported this aim by providing needy people with clean water.

Last year in Africa we accelerated the programme by launching our 1 Million Challenge – a commitment to provide water to one million people in Africa every year until 2015.

Diageo commissioned this independent evaluation of its 2007 Water of Life activities to validate the numbers of people impacted by our projects and assess their sustainability and levels of community involvement. The report finds that our 1 Million Challenge projects have had a positive impact on society benefiting nearly 850,000 people. The report also brings to life the real social, economic and health gains these communities have achieved thanks to better water security.

We are proud of what we have achieved in Africa, but there is a lot more that can be done. We will continue to work in partnership with NGOs, governments, communities, employees and like-minded businesses to enrich communities in Africa.

Nick Blazquez
Managing Director, Diageo Africa

Much corporate reporting in the area of social engagement sounds better than it is on the ground, with polished rhetoric and short term benefit evident, but little to show in the longer term. So I was slightly wary when asked to review this evaluation. However I am delighted to say on the basis of this report that the tide may be turning. Why?

- The recognition that there is a sound business case to improve water and sanitation in Africa; to do it properly and at scale
- The recognition that the UN MDGs offer the means for companies to facilitate work with governments
- The awareness from Diageo’s direct experience in their ambitious ‘Water of Life’ programme that however technically competent they were, it was the process of engaging with partner organisations, communities and local government that often made the difference between success and failure.

The openness with which this report shares the successes and failures during the year is commendable. Revised definitions of sustainability and how to identify real beneficiaries both suggest that Diageo wants to get the practicalities right which is a good omen for the future of this programme. It reflects thoughtful and positive progress in an area of corporate activity affecting one of the most fundamental social, economic and political issues of the years ahead.

William Day
Chairman, Water and Sanitation for the Urban Poor (WSUP)
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<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>AMREF</td>
<td>African Medical Research Foundation</td>
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<td>CDF</td>
<td>Constituency Development Fund</td>
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<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
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<tr>
<td>CHW</td>
<td>Community Health Workers</td>
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<tr>
<td>CRADEC</td>
<td>Regional Centre for Endogenous Sustainable Development</td>
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<td>EABL</td>
<td>East African Breweries Ltd.</td>
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<td>EABLF</td>
<td>East African Breweries Ltd. Foundation</td>
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<tr>
<td>GCSA</td>
<td>Guinness Cameroun S.A.</td>
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<td>GCF</td>
<td>Guinness Community Fund</td>
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<td>GGBL</td>
<td>Guinness Ghana Breweries Ltd.</td>
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<tr>
<td>GNplc</td>
<td>Guinness Nigeria plc</td>
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<tr>
<td>IMCs</td>
<td>In-Market Companies</td>
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<td>JMP</td>
<td>Joint Monitoring Programme</td>
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<td>KDWSP</td>
<td>Kigezi Diocese Water and Sanitation Programme</td>
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<tr>
<td>KPHC</td>
<td>Kaproron Primary Health Care</td>
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<tr>
<td>MDGs</td>
<td>Millennium Development Goals</td>
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<tr>
<td>NGO</td>
<td>Non-governmental organisation</td>
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<tr>
<td>NTU</td>
<td>Nephelometric Turbidity Unit</td>
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<tr>
<td>PHAST</td>
<td>Participatory Hygiene and Sanitation Transformation</td>
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<tr>
<td>UBL</td>
<td>Uganda Breweries Ltd.</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>UNSGAB</td>
<td>United Nations Secretary General's Advisory Board on Water and Sanitation</td>
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<tr>
<td>WHO</td>
<td>World Health Organisation</td>
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</table>
To do this, Diageo’s approach to corporate social responsibility is informed by the Enriched Communities strategy. This is a framework for Diageo’s corporate citizenship initiatives in Africa and emerged from a decision within Diageo to focus on just a few key areas where the company could make a significant and lasting impact. One of these key areas is water.

From 2000 to 2006, Diageo Africa supported a variety of water projects across six African countries, which reached an estimated 500,000 people. In 2006, in line with the Enriched Communities strategy and in recognition that the company’s accumulated experience and track record in water projects positioned it well to make a greater impact, Diageo made a commitment to upscale this ‘Water of Life’ initiative. The result was the 1 Million Challenge, an annual programme to reach one million people with access to safe and sustainable drinking water.

Diageo’s Water of Life initiative is part of a commitment to contribute to the achievement of the Millennium Development Goal (MDG), in particular target 10 under goal seven to reduce by half the proportion of people without sustainable access to safe drinking water. This commitment is in recognition of the importance of water to Diageo’s business and its critical link to the health and wealth of communities that Diageo serves in Africa, where an estimated 400 million people do not have access to safe drinking water (UN-Water/Africa: 2006).

Diageo recognises that the main responsibility for achieving the MDGs lies with governments. However, Diageo like all other companies has a role to play in supporting the achievement of the MDGs and in addressing some of the specific targets. Indeed, Diageo believes that when governments, the private sector and non-governmental organisations (NGOs) bring their key strengths together in partnership, amazing results can be achieved.

Given the central importance of water in meeting development challenges, Diageo has made significant commitments in this area, with the Water of Life initiative, as a signatory to the UN Global Compact CEO Water Mandate and with the efficiency of its internal water supply. The company is determined to make a real and measurable impact in improving water security in Africa and beyond.
The Water of Life 1 Million Challenge represents an annual goal to reach a target of one million beneficiaries each year until 2015. Diageo’s approach is distinctive in the variety of implementing partners and approaches it takes, as well as the hands-on nature of its involvement from project selection to delivery.

Diageo’s operating businesses, or In-Market Companies (IMCs) donate a percentage of their trading profits to water and sanitation projects in and around the areas where they operate. The IMCs gather project proposals from implementation partners, including international and grassroots NGOs, engineering firms, and government ministries as well as local communities. This approach leads to a pipeline of projects appropriate to local need, conditions and available technologies. Funding is also available from the Diageo Foundation (a registered charity which aims to create positive, long-term change in the community) and internal employee giving-schemes.

A total of 38 projects were selected, funded and implemented during 2007 across eight countries: Kenya, Uganda, Ghana, Cameroon, Nigeria, Burkina Faso, Ethiopia and Tanzania. Throughout project implementation, Diageo and its IMCs helped to project manage and even deliver projects. These projects range from borehole construction and rehabilitation, rainwater harvesting, water filter projects and hand pumps. Within the next year, Diageo has plans to extend the Water of Life 1 Million Challenge to other African countries.

Validating the 1 Million Challenge

Integral to the 1 Million Challenge is a strong emphasis on impact and evaluation. This begins with target-setting by each IMC, and continues through project selection based on impact and sustainability criteria, and, for 2007, has concluded in an independent nine month validation of Diageo’s first 1 Million Challenge.

The external review assessed 31 out of 38 1 Million Challenge projects, comparing the targets set by the implementation partner to what has actually been achieved and what will realistically be achieved when the projects are complete. In addition, 29 projects were evaluated for their sustainability and community involvement, identifying wider economic and social benefits accrued by the beneficiaries.

As there is no single internationally recognised monitoring or reporting standard for the delivery of community-based water projects, and Diageo’s approach being inherently varied, the validation study has been valuable in establishing a shared vision among Diageo’s IMCs - developing a reporting standard and self-assessment process for the continuation of the 1 Million Challenge until 2015.

In 2007, Diageo Africa and its implementation partners committed to delivering clean water to 1,061,960 people via a total of 38 projects in eight countries. The validation study has confirmed that Diageo-funded projects will reach 80 per cent of that target when all projects are complete, benefiting 841,460 people. A degree of variation was expected as Diageo relied on estimated beneficiary numbers from its implementation partners when target setting. Diageo has set a noteworthy example by setting a high target, which enabled it to significantly upscale its impact in just one year. It has established through this experience what variation to expect and manage when setting targets for the 1 Million Challenge in the future.

<table>
<thead>
<tr>
<th>Country/market</th>
<th>Beneficiaries</th>
<th>Total target of beneficiaries 2007</th>
<th>Beneficiaries reached at project completion</th>
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<tbody>
<tr>
<td>Kenya</td>
<td>206,000</td>
<td>109,500</td>
<td></td>
</tr>
<tr>
<td>Uganda</td>
<td>6,800</td>
<td>6,800</td>
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<tr>
<td>Venture Africa</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Burkina Faso</td>
<td>70,200</td>
<td>57,500</td>
<td></td>
</tr>
<tr>
<td>• Ethiopia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Ghana</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Tanzania</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cameroon</td>
<td>66,000</td>
<td>37,000</td>
<td></td>
</tr>
<tr>
<td>Nigeria</td>
<td>425,000</td>
<td>448,000</td>
<td></td>
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<tr>
<td>Ghana</td>
<td>287,960*</td>
<td>182,660</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,061,960</td>
<td>841,460</td>
<td></td>
</tr>
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* Includes non-validated project targets
East African Breweries Ltd (EABL), which funded projects in Kenya and Uganda, had a wide and diverse portfolio of projects. The projects ranged from rainwater harvesting tanks and training centres, borehole construction and water tank construction for local hospitals. While some of the projects that it funded did not reach all of the intended beneficiaries, EABL Foundation (EABLF) was successful in raising co-funding with the Kenyan Constituency Development Fund (CDF). The projects were particularly strong in the area of sustainability and community ownership as many originated from community requests and included local in-kind and/or financial contribution. The grassroots approach taken by EABLF ensures that the projects have a high likelihood of enduring long after the company’s funding ceases. Building trust and recognition among its communities will enable EABLF to implement projects in the future with reduced transaction costs.

Venture Africa operates in numerous countries across Africa but is based in London. Due to its organisational structure (which operates through licence brewing and third-party spirits distributors), Venture Africa’s approach has been to team with international NGO partners such as the African Medical Research Foundation (AMREF UK) and WaterAid UK, in Burkina Faso, Ethiopia, Tanzania, and Ghana (through a business partner). These projects are comprehensive, spanning three to five years for implementation. They apply locally appropriate water technology, sanitation and hygiene elements, capacity building and monitoring and evaluation, resulting in high sustainability and community ownership levels. Venture Africa has done remarkably well managing these large-scale projects in collaboration with the implementation partner. While the full beneficiary target was not reached in 2007, the projects are on track to exceed well beyond the original targets in the course of the next few years. Venture Africa has also lead the way in engaging its employees around Water of Life and embedding the 1 Million Challenge into its business. Through Venture Africa’s Nile Miles campaign Diageo employees volunteered their time, skills and money to the AMREF project in Mkuranga, Tanzania, raising nearly £90,000 towards the project costs, to help 124,000 people gain access to safe drinking water.

Guinness Cameroun S.A. (GCSA) funded its 1 Million Challenge projects through the Guinness Community Fund. It worked with the Regional Centre for Endogenous Sustainable Development (CRADEC), a well-regarded regional NGO, to deliver an exemplary holistic approach to community investment and water provision, including environmental management and conservation. This integrated approach to water provision created more challenging conditions to reach the targeted number of beneficiaries, a consideration being taken forward for 2008. Sustainability criteria were included in project selection, resulting in a highly sustainable impact with good community ownership.

Guinness Nigeria plc (GNplc) has drawn on its business strengths and its relationship with the national government to implement 1 Million Challenge projects, reaching large numbers of people very efficiently. Community areas were selected in collaboration with the local governor and engineering firms were hired to construct boreholes, elevated water tanks and distribution systems, reaching between 50,000 to 100,000 people per project. Their approach was developed due to a limited number of adequate implementation partners in the NGO sector in Nigeria. The communities that Guinness Nigeria operates in have traditionally expected ‘turn-key solutions’ from corporate community investment programmes. This attitude has had implications for the level of community ownership within the projects, but Guinness Nigeria is addressing this issue by taking steps to involve more community members in managing the water sources themselves.

Guinness Ghana Breweries Limited (GGBL) showcases an innovative and entrepreneurial approach to the problem of chronic guinea worm incidences in the country. With international NGO EnterpriseWorks, the company contributed towards four water filter projects focused on distributing locally produced ceramic filters. The projects aim to improve public health and establish a profitable and sustainable supply chain of water filters, creating jobs and incomes. GGBL funded three other projects: two borehole construction projects and one tablet purification project. Due to excellent implementation and monitoring by EnterpriseWorks, most targets were met for the water filter projects.

Each IMC took a unique approach and all achieved commendable results. Taken in combination, the outcomes achieved by all have helped to establish best practice to share across markets and build upon year on year.
Reaching beneficiaries on the scale of one million year on year requires special attention to sustainability to ensure the positive impact of each project continues to transform lives after Diageo’s funding ceases. In the validation study, Diageo evaluated the sustainability and community ownership of the projects and found very good results across the board.

The analysis of 29 projects has given Diageo an insight into the best practice factors for ensuring the sustainability and community ownership of future 1 Million Challenge projects. The common best practice factors are:

- Locally appropriate technology incorporated within an existing water system
- Investigation of geological features
- Inclusion of local authorities and/or integration with government water policies
- A sanitation and hygiene component, or the ability for Diageo to enable this component with a partner. Examples include training, facilities, or education in sanitation and hygiene
- Establishment of a water committee taking into account gender-related and democratic issues
- Capacity building and training for maintenance and repairs
- Financial or in-kind contribution by the community
- Regular and accurate reporting and measurements, along with target setting and baseline assessments.

In addition, communities reached by the 1 Million challenge reported indirect benefits of improved access to drinking water, including: a reduction in water-borne diseases; a diversification of income sources through improved irrigation, livestock improvements, new skills and capacities; an increase in education and improved hygiene and sanitation; and increased physical and social security, particularly for women.

Percentage of projects and their sustainability and community ownership rating

- 3% Low
- 45% Medium
- 52% High
Lessons and way forward

The challenges that limited some projects’ impact held important lessons for how to build upon 2007 performance going forward. These challenges related to: project selection criteria; the need for standard definitions; types of technology employed; the speed and complexity of project implementation; and the level of transaction costs.

Going forward, Diageo will focus on key areas and lessons identified through the validation study to ensure the ongoing success of the 1 Million Challenge. The validation study has drawn out results that will feed into a 1 Million Challenge Handbook. The handbook is a self-assessment tool for each IMC to apply consistent standards whilst continuing to work in ways appropriate and relevant to their own context. This handbook will amongst other things, clarify:

- The standard definition of a beneficiary
- The focus on impact embodied in the 1 Million Challenge
- Project selection criteria; and
- Sustainability and community ownership criteria.

Diageo has also examined its production and supply sites in Africa located in or near communities. These sites often have their own boreholes for water supply; yet access for the communities to these water points has not traditionally been measured or monitored by the IMCs. The validation study has helped Diageo to establish guidelines for the IMCs to integrate local access into the 1 Million Challenge.

Diageo has identified two key lessons to ensure the longevity of the 1 Million Challenge. First, it can only be fully sustained if each IMC has a strong business case for funding and implementing community water projects. The business benefits reaped so far include enhanced government relations (both local and national government), better community relations and improved employee motivation and pride.

Second, Diageo requires strong, long-term partnerships with organisations who share the same vision and values behind the 1 Million Challenge. As a partner, Diageo offers:

- Strong local networks, including influential decision makers at the national and local level, that help in identification and implementation of suitable projects in Africa;
- A good reputation derived from long-term experience and successful investments in capital projects in Africa;
- Access to governments and credibility with donors to secure extra funding and galvanise key stakeholders into action;
- Engaged and supportive employees; and
- Earmarked corporate citizenship funds with a focus on ensuring that projects are well implemented.

Diageo will continue to set high targets and stretch to reach them each year under the 1 Million Challenge. Looking back on the first year to identify best practice factors and validating the original targets set by partners has been an important element of the 1 Million Challenge. The most striking feature of the first year was the variety of approaches adopted across the markets, illustrating that there is no single way to achieve impressive results. Indeed, responding to local challenges with local funding, project teams and solutions is part of what has made Diageo’s approach so effective so far.

In the first year of the 1 Million Challenge, Diageo’s reflection on its performance has strengthened its belief that targets can inspire and motivate people to achieve amazing results. Diageo has demonstrated what can be done with the right combination of commitment, support and partners. The experience has strengthened Diageo’s resolve to continue increasing its impact in water in line with the MDGs in Africa, and beyond.
Introduction

Multinational companies operating in developing countries are in a unique position to provide a positive contribution towards sustainable development. Companies can transform lives and livelihoods through their core business activities, such as direct employment, local procurement and a responsible delivery of products and services as well as through their corporate citizenship programmes.

Diageo is the world’s leading premium drinks business trading in over 180 markets. Diageo Africa is active, particularly in brewing but also in distilling, in the majority of the sub Saharan African countries and accounts for around 20 per cent of Diageo’s workforce worldwide. Diageo understands that it has an impact not just within its company’s fence-line, but beyond the fence-line too. In Africa, the other side of Diageo’s fence is a picture of diversity, complexity and variety.

What Diageo would like to see outside their company grounds are communities, which have been enriched through Diageo’s contributions to enhance economic development, health, and environmental security. To ensure that its impact is truly transformational, Diageo has focused on a few key areas where the company can make a significant and lasting impact. The Enriched Communities Strategy is a framework to guide Diageo Africa’s corporate citizenship initiatives.

The current focus is on education through Skills for Life; promoting responsible drinking and marketing (through compelling insight-driven programmes and industry initiatives); implementing HIV/AIDS workplace programmes; assisting disaster recovery through Diageo’s Disaster Relief Fund; and, finally providing access to safe, sustainable drinking water and environmental conservation through Water of Life.

Over the years, Water of Life has been a particular focus for Diageo Africa. Certain areas of Africa suffer from water-scarcity and water-stress (UNECA: 1999). Though Diageo does not operate in these specific areas, the company recognises the interconnected nature of water and the importance water plays in economic development, security and conflict resolution. As a business, Diageo depends on water not only to sustain its employees and customers, but also to produce its products. Alongside the Water of Life programme, Diageo has set internal targets for water efficiency, water management and environmental conservation to achieve its goal to be the most celebrated business in Africa. The positive health, economic and developmental impacts that clean drinking water provides is irrefutable. The link between water and the achievement of the MDGs is also widely recognised. As one of the first signatories of the UN Global Compact, Diageo has set its targets with a focus on achieving positive impacts in line with internationally agreed frameworks. And now Diageo is also a signatory of the UN CEO Water Mandate.

Water is key to sustainable development; it underpins food security, people’s livelihoods, health, industrial growth and humanity’s long-term existence. About one sixth of the world population – a total of 1.1 billion people – remain without access to improved drinking water (WHO/UNICEF: 2006. An estimated 400 million of these people live in Africa UN-Water/Africa: 2006).

Sustainable water access and sanitation makes an important contribution to the achievement of the MDGs through hunger reduction, universal education, empowerment of women, improved health and combating disease, environmental sustainability and advancing global partnerships for development. The table below provides the estimated contribution of water and sanitation to the achievement of the MDGs.

### Freshwater stress and scarcity in Africa by 2025

<table>
<thead>
<tr>
<th>Water scarcity in 2025 (less than 1,000 m³/capita/year)</th>
<th>Water stress in 2025 (1,000 to 1,700 m³/capita/year)</th>
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</thead>
<tbody>
<tr>
<td>Global water-stress and scarcity (billions of people affected)</td>
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</table>

The contribution of water and sanitation to all MDGs

<table>
<thead>
<tr>
<th>MDG</th>
<th>Objective</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDG 1</td>
<td>Eradicate extreme poverty and hunger</td>
<td>30%</td>
</tr>
<tr>
<td>MDG 2</td>
<td>Achieve universal primary education</td>
<td>30%</td>
</tr>
<tr>
<td>MDG 3</td>
<td>Promote gender equality and empower women</td>
<td>20%</td>
</tr>
<tr>
<td>MDG 4</td>
<td>Reduce child mortality</td>
<td>30%</td>
</tr>
<tr>
<td>MDG 5</td>
<td>Improve maternal health</td>
<td>45%</td>
</tr>
<tr>
<td>MDG 6</td>
<td>Combat HIV/AIDS, malaria and other diseases</td>
<td>25%</td>
</tr>
<tr>
<td>MDG 7</td>
<td>Ensure environmental sustainability</td>
<td>50%</td>
</tr>
<tr>
<td>MDG 8</td>
<td>Develop a global partnership for development</td>
<td>No estimate</td>
</tr>
</tbody>
</table>

Source: UNSGAB 2007

Access to water for domestic and productive uses has a direct impact on poverty and food security, enabling communities to improve their agricultural capacity and reduce their vulnerability to catastrophic water events such as droughts. Increasing access to clean water and sanitation has a direct correlation to improved health by reducing water-borne diseases and ameliorating other diseases such as malaria and HIV/AIDS. Improved nutrition and food security and reduced susceptibility to diseases also increases attendance levels at schools, reduces child mortality and improves maternal health. Ensuring clean water leads to better management of water and waste. This reduces pollution and increases water conservation, both key factors in maintaining ecosystems and services. Access to water also has important gender related implications, affecting the social and economic capital of women in terms of leadership, earnings and networking opportunities. Finally, the intersectoral nature of water provision requires a collaborative approach, driving the development of global partnerships for development. (UN-Water and FAO: 2007).

With this understanding, Diageo’s Water of Life aims to improve community access to drinking water by implementing water and sanitation projects with partners, aid environmental conservation, improve internal water efficiencies, and deliver capacity-building training to key stakeholders. Drawing on its previous track record of delivering water to 500,000 people between 2000 and 2006, Diageo was inspired to create a bigger and more sustained impact.

In 2006, the 1 Million Challenge was born, aiming to reach one million people each year until 2015 with improved access to drinking water through community-based projects Diageo Africa and its implementing partners committed to delivering clean water to 1,061,960 people during 2007.

As part of the decision to upscale, from the outset Diageo wanted to understand the impact these water projects were having on the ground and to have total confidence in the numbers and targets set with its numerous implementing partners. Diageo commissioned a nine-month validation study of Diageo-funded projects in 2007, as well some pre-2007 funded projects.

The validation of the water projects has provided a more accurate understanding of the reality on the ground, the sustainability of the projects and how Diageo can continue to deliver on their commitment until 2015.

The validation study relied on quantitative and qualitative data collected from primary and secondary resources. Primary data was collected by:

- Structured interviews with implementation partners, Diageo in-market employees, national and regional government staff, private sector artisans and water vendors, and direct beneficiaries;
- Focus groups with direct and indirect beneficiaries, implementation partners and water and sanitation committees; and
- Field observations.

Secondary data included:

- Geological information and chemical analyses;
- Project documentation;
- Policy integration information from government authorities; and
- Budgetary expenses.

Information about each project was analysed and verified for reliability and accuracy. Each project target was reviewed against a standard definition of ‘beneficiary’¹ and factors that included:

- Population size and density;
- Household size and number of households;
- Levy charged for the water and financial administration;
- Water yield and reliability of the technology; and
- Water quality and sustainability of the water source.

Finally, each project was scored against fourteen sustainability and community ownership criteria (see overleaf for more details), one for a low rating, two for medium and three for a high rating. Scores were aggregated to give an overall project rating of high, medium or low.

¹ Beneficiaries are defined as those people with access to at least 10 – 15 litres of improved drinking water per day. Ideally, beneficiaries will live only 500 metres from the water source. In rural areas, beneficiaries are those living within two kilometres of the water source. Improved drinking water includes: piped water into a dwelling, plot or yard, a public tap/standpipe, a tube well/borehole, a protected dug well, a protected spring, rain water collection, water filtration and purification.
Sustainability and community ownership criteria

Sustainability and community ownership was measured against fourteen criteria:

- **Technology** - locally appropriate technology
- **Financing and cost recovery** - levy collections
- **Maintenance** - human technical skills to repair equipment
- **Spare parts** - availability of spare parts to the community or engineers
- **Institutional arrangements** – delegated responsibility and organisation
- **Training** - community capacity building
- **Integrated sanitation and hygiene component** - including sanitation and hygiene sensitisation and facilities
- **Project process** – community interaction and/or reliance on donor
- **Community contribution** - community provided financial and/or in-kind contributions to the project
- **Leadership involvement** – consultation with elders and/or traditional leaders of the community
- **Water committee** – establishment of a water and sanitation committee to manage the water point
- **Involvement of local government** – involvement of local authorities in site selection process
- **Level of water supply** – quality of water and sustainability of water source
- **Access/inclusion** – amount of people receiving access to the water point and the frequency of this access.

For more detail on the methodology and rating system see Appendix 2.1.

Overall, this study included visits to 31 out of 38 projects located across eight countries: Kenya, Uganda, Burkina Faso, Ethiopia, Tanzania, Ghana, Cameroon and Nigeria. It confirmed that the 1 Million Challenge 2007 will reach 841,460 beneficiaries. The validation study also confirmed that all projects, bar one, had achieved a high or medium sustainability and community ownership rating.

This report is a summary of the validation results, segmented by market and country. The report highlights best practice, sustainability and impact lessons, drawing on these to create a way forward through a self-assessment handbook. The report also identifies key lessons to ensure the longevity of the 1 Million Challenge. It is the company’s hope that these lessons can also inform other organisations’ efforts to make a positive and lasting impact in the area of water.
Country and market overviews
Country and market overviews

Summary table for 2007

<table>
<thead>
<tr>
<th>Country/market</th>
<th>Total target of beneficiaries 2007</th>
<th>Beneficiaries reached at project completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenya</td>
<td>206,000</td>
<td>109,500</td>
</tr>
<tr>
<td>Uganda</td>
<td>6,800</td>
<td>6,800</td>
</tr>
<tr>
<td>Venture Africa</td>
<td>70,200</td>
<td>57,500</td>
</tr>
<tr>
<td>• Burkina Faso</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Ethiopia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Ghana</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Tanzania</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cameroon</td>
<td>66,000</td>
<td>37,000</td>
</tr>
<tr>
<td>Nigeria</td>
<td>425,000</td>
<td>448,000</td>
</tr>
<tr>
<td>Ghana</td>
<td>287,960*</td>
<td>182,660</td>
</tr>
<tr>
<td>Total</td>
<td>1,061,960</td>
<td>841,460</td>
</tr>
</tbody>
</table>

* Includes non-validated project targets

Map-overview of validated projects
Kenya – validated projects

1. Nzueni project
   - Technology: Borehole rehabilitation
   - Partner: AMREF Kenya
   - Validated number of beneficiaries: 8,000
   - Original number of beneficiaries: 55,000

2. Nyatigo project
   - Technology: Three hand pumps
   - Partner: UNEP
   - Validated number of beneficiaries: 3,000
   - Original number of beneficiaries: 3,000

3. Gatanga project
   - Technology: Six water tanks
   - Partner: CDF
   - Validated number of beneficiaries: 2,000
   - Original number of beneficiaries: 20,000

4. Nyanza project
   - Technology: Six water tanks
   - Partner: Rongo CDF
   - Validated number of beneficiaries: 500
   - Original number of beneficiaries: 50,000

5. Kajiado project
   - Technology: Four borehole rehabilitations
   - Partner: AMREF Kenya
   - Validated number of beneficiaries: 4,000
   - Original number of beneficiaries: 5,000

6. Karaba project
   - Technology: Borehole and earth dams
   - Partner: Diocese of Embu
   - Validated number of beneficiaries: 25,000
   - Original number of beneficiaries: 50,000

7. Ranen project
   - Technology: Borehole construction
   - Partner: Ranen community, Rongo CDF
   - Validated number of beneficiaries: 60,000
   - Original number of beneficiaries: 15,000

8. Tongaren project
   - Technology: Borehole construction
   - Partner: Geo Science Products
   - Validated number of beneficiaries: 5,000
   - Original number of beneficiaries: 5,000

9. Ndemi, Nyandarua District
   - Technology: Borehole construction
   - Partner: GPS Drilling/Davis and Shirtliff
   - Validated number of beneficiaries: 2,000
   - Original number of beneficiaries: 3,000

For key to technology icons see Appendix 3.1.
Uganda – validated projects

1 Kabale project
- Technology: Rainwater harvesting
- Partner: Two Wings Agro Forestry Network (TWAN) Women’s Group/Kacyiro Health Centre
- Validated number of beneficiaries: 3,000
- Original number of beneficiaries: 3,000

2 Kapchorwa project
- Technology: Rainwater harvesting
- Partner: ACCORD
- Validated number of beneficiaries: 3,000
- Original number of beneficiaries: 3,000

3 Ekintangala fish farm project
- Technology: Borehole construction
- Partner: Habitat for Humanity
- Validated number of beneficiaries: 800
- Original number of beneficiaries: 800

For key to technology icons see Appendix 3.1.

*Note:* The Rainwater Harvesting Training Centre in Kabale was not visited. Work began on the project after the validation visit.
Approach to the 1 Million Challenge

EABL supported the greatest number and diversity of projects, from borehole construction to rainwater harvesting.

The EABL Foundation selects its Water of Life projects mainly through direct requests from communities, who learn about the Water of Life programme through advertising and word of mouth.

In Kenya, the 1 Million Challenge reached 109,500 beneficiaries through nine projects. The original target proposed by the implementation partners added up to 206,000. The variation was mainly due to proposed targets being more a reflection of overall population than actual beneficiaries; the projects themselves were not significantly flawed. In Uganda, three projects were funded, reaching the original target number of 6,800 beneficiaries, mainly through household rainwater harvesting. An additional project to build a rainwater harvesting centre will provide the necessary skills for further application of this technology in many more communities (see rainwater harvesting centre case study on page 40).

The project cost in Kenya was £3.79 per head on average, ranging between £0.18 and £10.58 per head, depending on the comprehensiveness of the project. In Uganda, the average cost per head was £9.38, ranging from £3.54 to £16.33 per head. The expense of the latter project in Kapchorwa, Uganda was due to the fact that:

- The rainwater tanks were disseminated per household. Kapchorwa traditionally has a low population density;
- Kapchorwa is relatively isolated and very hilly, with poor transport links resulting in an increased price of materials. However, the area was chosen by EABL as the beneficiaries are farmers who produce EABL’s production crops such as barley and maize.

Sustainability and community ownership – Best practice

The majority of the projects achieved a high level of community ownership and sustainability (five out of eight projects in Kenya and all three projects in Uganda rated high).

The following best practice contributed to a high level of sustainability and community involvement:

- Most projects originated from and were driven by the benefiting communities
- Most projects included in-kind and/or financial contributions by the communities
- Government authorities or local MPs were included in the design, funding and implementation of the project. Many projects received funding from the Constituency Development Fund (CDF)
- The use of existing community structures or community-based organisations had a very positive impact on the degree to which the community was involved
- Water committees were established and engaged. The most active committees partook in education and training, as well as a levy collection, employment of local operators and procedures and funds for maintenance and repairs
- Capacity building in maintenance and project administration created high levels of community ownership and sustainability
- In the hospital-based projects, through hygiene and sanitation education, community awareness about the importance of clean water has improved.

The EABL Foundation selects its Water of Life projects mainly through direct requests from communities, who learn about the Water of Life programme through advertising and word of mouth.
The project in Kajiado provides water from three rehabilitated boreholes with diesel-powered generators for nomadic Masai communities in a semi-arid area, reaching 4,000 people in total. The project included the establishment of water committees and extensive training for the water committee members and borehole operators.

The borehole sites are equipped with sanitation facilities that were introduced in combination with a culturally sensitive awareness campaign.

The project has established a very transparent system for levy collection, which raises enough money for maintenance and major repairs in the future and has established a safe storage space for spare parts. A combination of close cooperation with the community and capacity building point to the long-term sustainability of the project.

Case study: Borehole rehabilitation, Kajiado, Kenya

The rainwater harvesting project in Kapchorwa involved the construction of 120 rainwater harvesting tanks in a rural community without adequate water supply, directly benefiting 3,000 people. Due to an existing relationship with local farmers who produce barley for East African Breweries Ltd (EABL) and strong civil society in the project area, the level of community mobilisation was very high.

This led to higher than expected financial contribution from the beneficiaries. This enabled the construction of 20 per cent more tanks than originally envisaged. Local artisans were trained to build and maintain the tanks, and these artisans are now using their new skills to generate new income.

The project also included a strong sanitation component which helped support health improvements for the community. Each household had to qualify for co-funding by meeting five criteria: The household needed to have (1) a latrine, (2) a rubbish bin, (3) a bath shelter, (4) a drying rack for utensils and (5) show general domestic cleanliness. With rainwater harvesting, close monitoring of water quality is required, especially during the dry season when there is no regular inflow into the tanks. The project therefore included an awareness campaign about purifying the water by boiling it or purifying it with purification tablets.

Case study: Rainwater harvesting, Kapchorwa District, Uganda
Venture Africa – Validated projects

1. Burkina Faso, Bogodogo project
   - Technology: Borehole rehabilitation and construction with handpumps and water connection points
   - Partner: WaterAid
   - Validated number of beneficiaries: 8,000
   - Original number of beneficiaries proposed: 8,000.

2. Ethiopia, Kechene project
   - Technology: Piped connection to water mains with hygiene and sanitation facilities
   - Partner: AMREF
   - Validated number of beneficiaries: 6,000
   - Original number of beneficiaries proposed: 10,000.

3. Ghana Filters project
   - Technology: Water filters
   - Partner: Brian Voakes
   - Validated number of beneficiaries: 15,000
   - Original number of beneficiaries proposed: 5,000.

4. Tanzania, Mkuranga project
   - Technology: Borehole construction, shallow wells, and rainwater harvesting
   - Partner: AMREF
   - Validated number of beneficiaries: 18,500
   - Original number of beneficiaries proposed: 37,200.

The map does not include a Venture Africa funded project - AMREF Ethiopian Floods Recovery project. This was not visited due to the nature of the project and it being situated in a disaster zone. However, a research-based validation study confirmed the number of beneficiaries at 10,000.

For key to technology icons see Appendix 3.1.
Approach to the 1 Million Challenge
Venture Africa operates in multiple countries without a fixed base in any African country. Its approach is to partner with international NGOs who have a presence in several countries.

Venture Africa funded four projects in four countries, which reached 57,500 in beneficiaries by the end of 2007. The original target to reach 70,200 beneficiaries included multi-year projects, and in their first year these projects reached fewer people than expected due to a significant time investment in training and community engagement. Based on the validation study it is anticipated that the projects will reach an additional 141,500 people by 2010 beyond the intended target.

The average cost per head was £4.11, ranging from £0.50 for Venture’s contribution to the water filter programme in Ghana to £8.33 for the project in Kechene, Ethiopia (this calculation only accounts for the 2007 financial year).

Sustainability and community ownership – Best practice
The quality of the projects supported by Venture Africa has been the most outstanding feature of this approach.

They are all implemented by highly professional international NGOs which foster a high level of community involvement and sustainability as well as strong sanitation and hygiene components. For example, the Water and Sanitation project in Kechene, Ethiopia included the construction of latrines, showers and hand-washing points, introduced to the community with an extensive hygiene and sanitation sensitisation programme.

All of the large-scale, multi-year projects in Burkina Faso, Ethiopia and Tanzania achieved high sustainability and community ownership ratings. The following key successes and best practice factors are identified:

- The projects in Burkina Faso, Ethiopia and Tanzania target the poorest and most vulnerable community members
- Close collaboration occurred with local government authorities to design, implement and manage existing and new community water sources as well as ensure environmental sanitation. Projects also included the training of local government officials.
- The projects built community capacity to act upon their need for water and incorporate income-generating activities. This encourages and empowers the communities to maintain facilities after funding terminates.
- In Burkina Faso, the project is not only self-sufficient but is expanding. The levy collection system is now providing enough funds to extend the project. One of the community-managed project sites is already benefiting the construction of an additional fetching point as a result.

Policy integration for success
The WaterAid project in Burkina Faso funded by Venture Africa demonstrates the positive impact of enhancing local governance structures and building local government capacity. The project included the creation and funding of a new position within the local government for a water and sanitation expert, who became the project manager for this specific project. As a consequence, the local government gained the ability to play a central role in managing this and future water and sanitation projects. In addition, WaterAid’s project gained the assurance that it was in line with Burkina Faso’s water policies.
Case study: Employee giving scheme

Nile Miles is an example of a successful employee engagement and fundraising initiative. Diageo’s employees rallied around the 1 Million Challenge by volunteering their time and skills and by raising money.

The Nile River threads its way through seven African countries providing water and support for millions of families. With a target of raising £41,870, or £10 for every mile of the Nile River, employees took a virtual journey down the Nile River to raise funds for the Mkuranga, Tanzania project implemented by AMREF. Employees’ enthusiastic support exceeded all expectations, raising nearly £90,000 towards the project costs. It will reach 124,000 people in Mkuranga with a sustainable supply of clean drinking water through the construction of boreholes and wells in several communities.
Guinness Cameroun S.A. – Validated projects

1. Souledé village project
- Technology: Concrete dams in river bed
- Partner: CRADEC
- Validated number of beneficiaries: 25,000
- Original number of beneficiaries proposed: 50,000.

2. Bomono village project
- Technology: Gravitational-fed distribution system using natural sources
- Partner: CRADEC
- Validated number of beneficiaries: 8,000
- Original number of beneficiaries proposed: 12,000.

Sustainability and community ownership – Best practice
These projects were rated high in the areas of sustainability and community ownership. The application process for the Guinness Community Fund is exemplary and includes criteria on need and use, the level of community involvement, the sustainability and feasibility of the project as well as its overall environmental impact. Communities donated financial contributions of up to 10 per cent to the projects as well as providing in-kind contributions. Communities reaped many benefits from the successful implementation of the projects, with increased water available for livestock and irrigation.

Water in rural areas – Taking a holistic approach to water and development
Water development is linked closely to poverty reduction, especially in low-income countries where the economy is highly dependent on agriculture. As most of the world’s poor live in rural areas, one of the most effective ways of reducing hunger and poverty is to raise their productive capacity through agricultural development. For many African countries, benefit of alternative economic opportunities in rural areas, agriculture is viewed as the principal avenue for social development. Expectations are high that agriculture can deliver national economic growth and at the same time lift millions of households out of poverty (UN-Water and FAO (2007)).

Agricultural development relies on effective irrigation, water management programmes and environmental conservation. The three projects selected by the GCF exemplify the importance of building infrastructure and promoting environmental conservation to increase the capacity for agriculture, economic growth and social development.

Approach to the 1 Million Challenge
GCSA selected its Water of Life projects based on applications from local communities through the Guinness Community Fund (GCF).

The Fund was established in 2003 to deliver a holistic approach to community investment, focusing on infrastructure for water provision, electrification, bridges, the construction or renovation of community sport facilities and cultural preservation. The projects were all selected and implemented together with the Regional Centre for Endogenous Sustainable Development of Communities (CRADEC), a well-regarded regional NGO with a good track record.

Whereas most other projects under the 1 Million Challenge in 2007 were closely focused on impact in terms of numbers reached, the projects selected in Cameroon had different objectives (mainly community and environmental focus areas), and were selected before the 1 Million Challenge. In these projects which were selected in 2005 by the GCF, drinking water was delivered through a holistic approach of environmental conservation (such as the building of earth and stone dams) and significant community involvement, including contributions of technical expertise, manual labour and funds. Originally estimated at 66,000, the actual number of beneficiaries reached in 2007 was 37,000. The projects had a low average cost per head of £1.30, ranging between £0.48 and £2.13.
Case study: Water distribution system, Bomono village, Cameroon

The project in Bomono, Cameroon rehabilitated a water distribution system through the construction of a new reservoir, a piping system and a new pump. The distribution system collects water from two natural sources in a valley close to the community, which is treated and pumped to the reservoir. The water is then distributed to 12 fetching points within 300m of each benefiting household, reaching 8,000 people.

The project was selected in response to an application by the community to the Guinness Community Fund in 2005 and includes a financial contribution of 10 per cent by the community as well as the provision of technical expertise and labour, ensuring a high level of community involvement and ownership.

Case study: Nkolbikon I, Bertoua East, Cameroon

This project provides drinking water to 4,000 people in the peri-urban area of Eastern Province, Cameroon through the rehabilitation of a local water system.

The project was initiated by a request to the Guinness Community Fund from a local water and sanitation committee. Though this project was not visited, a socio-economic and feasibility study carried out by the implementation partner, CRADEC, as well as extensive community involvement, provides good indicators to the suitability of the technology employed and the long-term sustainability of the project.
Guinness Nigeria plc – Validated projects

1. Mbaise project
   - Technology: Borehole construction
   - Partner: Finning Limited
   - Validated number of beneficiaries: 100,000
   - Original number of beneficiaries proposed: 100,000.

2. Nassarawa project
   - Technology: Five borehole construction
   - Partner: Ralob & Company LTD
   - Validated number of beneficiaries: 50,000
   - Original number of beneficiaries proposed: 50,000.

3. Niger State project
   - Technology: Three borehole construction
   - Partner: New Millennium Developers Limited
   - Validated number of beneficiaries: 50,000
   - Original number of beneficiaries proposed: 50,000.

4. Epe, Lagos project
   - Technology: 25 hand pumps
   - Partner: EnterpriseWorks
   - Validated number of beneficiaries: 20,000
   - Original number of beneficiaries proposed: 20,000.

5. Lagos, Badia project
   - Technology: Borehole construction
   - Partner: Seg Malisen Limited
   - Validated number of beneficiaries: 6,000
   - Original number of beneficiaries proposed: 6,000.

6. Osisioma project
   - Technology: Borehole construction
   - Partner: WaterAid/GNplc engineering team
   - Validated number of beneficiaries: 7,500
   - Original number of beneficiaries proposed: 7,500.

7. Oregbani Benin project
   - Technology: Borehole construction
   - Partner: GNplc engineering team
   - Validated number of beneficiaries: 9,000
   - Original number of beneficiaries proposed: 25,000.

8. Lagos project
   - Technology: Borehole construction / Tank Project
   - Partner: Puzmax International Limited
   - Validated number of beneficiaries: 500
   - Original number of beneficiaries proposed: 500.

For key to technology icons see Appendix 3.1.

No. Three projects were not visited: The borehole project in Rivers State is currently located in a conflict zone and security concerns did not allow a visit of the project. The projects at the brewery in Benin as well as the borehole in Ajegunle, Lagos had not yet started at the time of the validation visit to Nigeria.
Approach to the 1 Million Challenge

Guinness Nigeria plc’s approach is focused on high impact projects that are selected in close collaboration with the local government. Most projects have been large-scale borehole construction, each project reaching 50,000 to 100,000 people.

Seven out of the eight validated projects in Nigeria use boreholes with elevated tanks and distribution systems while the eighth project provides water to a less densely populated area and uses boreholes with hand pumps.

Guinness Nigeria plc’s original target for 2007 was set at 425,000. The company however, continues to finance the maintenance of ongoing projects reaching as far back as 1997 – The Lagos-Badia project, Osisioma project and Benin City project. A proportion of the beneficiaries of these projects have been included in the 1 Million Challenge 2007 assessment. Having calculated the number of beneficiaries of these projects from the proportion of maintenance funds donated during the year and average population growth, Nigeria exceeded its target, reaching 448,000 beneficiaries. (See Appendix 2.4 for more detail).

The average cost per head for the validated projects was £1.09, ranging from as low as £0.40 (Mbaise, Imo state) to £2.41 (hand-pump project in Epe, Northern Nigeria).

Sustainability and community ownership – Best practice

The approach taken by Guinness Nigeria plc is very efficient in reaching the target numbers with high quality installations designed and constructed by local engineering firms.

This approach is the result of the limited number of implementation partners in the NGO sector. Subsequently, Guinness Nigeria plc’s projects are selected by the state governor who hands implementation over to the local government. While the elders of the community are involved in the implementation process, other community members are rarely involved during implementation or maintenance. For example, one of the older projects in Lagos is maintained by an external firm paid by Guinness Nigeria plc.

Communities in Nigeria often expect ‘turn-key solutions’ from corporate community investment programmes. This cultural attitude has implications for the level of community ownership of projects. While there is one exception, the hand pump project in Epe for which the partner NGO ensured a high level of sustainability and community involvement, all other projects depend heavily on Guinness Nigeria plc’s ongoing financial commitment. They consequently achieved a medium level of sustainability and community ownership.

Guinness Nigeria plc is already addressing this issue, increasing the level of community involvement for ongoing projects. Faced with high community expectations for ongoing corporate funding, Guinness is working towards changing attitudes and encouraging self-stewardship. These efforts should eventually allow more resources to be allocated to new projects in new communities instead of maintaining existing and well-functioning assets.

Case Study: Borehole Suleja and Abukwarka, Niger State

The project consists of three boreholes, each equipped with an elevated 60m³ tank and three fetching points within a 2km radius.

The project is benefiting 50,000 people in total and was implemented by a local engineering firm which resulted in a short implementation time and high quality installations.

The project benefits some of the neediest communities in the State, which was identified in collaboration with the local governments. The physical location of the boreholes and fetching points were selected in collaboration with geologists and community elders.

While the water is currently provided free of charge through the financial support of Guinness Nigeria plc, the company is currently working with the communities to increase their level of ownership and introduce a levy collection system that will make the running and maintenance of the project more self-sustainable in the future.
Guinness Ghana Breweries Limited – Validated projects

1. Diageo Foundation funded project
   - Technology: Distribution of water filters
   - Partner: EnterpriseWorks
   - Validated number of beneficiaries: 32,200
   - Original number of beneficiaries proposed: 50,000.

2. Diageo Africa Leadership Conference funded project
   - Technology: Distribution of water filters
   - Partner: EnterpriseWorks
   - Validated number of beneficiaries: 30,000
   - Original number of beneficiaries proposed: 20,000.

3. GGBL funded project
   - Technology: Distribution of water filters
   - Partner: EnterpriseWorks
   - Validated number of beneficiaries: 30,000
   - Original number of beneficiaries proposed: 30,000.

For key to technology icons see Appendix 3.1.

 Nb. Map does not include three more projects: Three boreholes in Kwabre District/Ashanti, Purification tables, Boreholes in northern Ghana and Adasawase. These projects could not be visited.
Approach to the 1 Million Challenge

GGBL’s main focus to date has been supporting three projects that distribute locally-produced ceramic filters with the implementation partner EnterpriseWorks.

By developing a market for the filters using a social marketing campaign, the projects aim to improve public health and establish a profitable and sustainable supply chain that creates local jobs and income.

The water filters are fundamentally different from all other Water of Life projects as they do not directly provide access to an improved water source. Rather, they ensure the safety of drinking water. For the first three years all filters will be distributed for free or subsidised. EnterpriseWorks ensures that customers are trained in how to use the filters correctly.

The water filters projects brought together several donors: The Diageo Foundation; Guinness Ghana Breweries Ltd; the Diageo Africa Leadership Conference4; and Mr Brian Voakes (a business partner of Venture Africa). The average cost per head of these water filter projects was £1.44.

GGBL supported three additional projects with other NGO partners. These projects involved the construction of three boreholes in Kwabre District/Ashanti and northern Ghana as well as five boreholes in Adasawase. The third project involved the distribution of purification tablets across Ghana for emergency relief.

Together, all six projects reached a total of 182,660 beneficiaries out of a target of 287,960. The variation was due primarily to a second feasibility study in Adasawase that reduced the target number of beneficiaries.

Sustainability and community ownership – Best practice

EnterpriseWorks carried out an assessment of its water filters projects and confirmed that health and economic benefits had accrued.

Ghana suffers from contaminated water sources resulting in guinea worm epidemics and high rates of diarrhoeal diseases. The EnterpriseWorks’ survey highlighted that there was a decrease in water-related diseases among water filter users. More non-users had diarrhoea cases in the past two months than filter users. A market in the selected communities was developed for the locally made filter, bringing additional income for local manufacturers and distributors. Income accruing to the manufacturers and raw material suppliers amounted to about US$100,000. (EnterpriseWorks: 2007).

EnterpriseWorks successfully fostered entrepreneurial structures and included capacity building and sensitisation to the communities across Ghana on entrepreneurship skills and filter usage. This project achieved a medium sustainability and community ownership rating, balancing the good likelihood of long-term sustainability based on the project design with the fact that for the next three years filters are free or subsidised.

As the borehole and purification tablet projects were not visited, a sustainability and community ownership evaluation could not be carried out.

4 The first annual Diageo African Leadership Conference was held at the end of February 2007 in Ghana. 20 business leaders and joint venture partners of Diageo Africa met to discuss the company’s commitment to the continent resulting in the raising of £130,000 for the filters project.
Sustainability and community ownership

Project sustainability and community ownership analysis

Evaluating the sustainability and level of community ownership of the 1 Million Challenge has helped to gain an understanding of the full impact of these projects. The challenge is not only to reach one million people each year with improved access to water, but also to ensure the impact is long-lasting and that each project can be managed successfully by the beneficiaries once Diageo funding has ceased.

<table>
<thead>
<tr>
<th>Sustainability and community ownership rating</th>
<th>Number of projects</th>
<th>% of projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>14</td>
<td>50%</td>
</tr>
<tr>
<td>Medium</td>
<td>13</td>
<td>46%</td>
</tr>
<tr>
<td>Low</td>
<td>1</td>
<td>4%</td>
</tr>
</tbody>
</table>

Overall, most projects did well on sustainability and community ownership, with only one project receiving a low rating. Projects with high sustainability and community ownership scores exemplified best practice in the area of water and sanitation projects. Medium ranked projects were successful against most criteria though certain areas could be improved.

Common factors can be drawn from the 14 high ranking projects. The table overleaf highlights these common factors and examples of their successful application.
<table>
<thead>
<tr>
<th>Factors for high levels of sustainability and community ownership</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locally appropriate technology incorporated within an existing water strategy.</td>
<td>The technology employed in the AMREF project in Mkuranga, Tanzania varied depending on what was locally appropriate, resulting in three types of improved water sources – protected shallow wells, deep boreholes with hand pumps and rainwater harvesting.</td>
</tr>
<tr>
<td>Establishment of a water committee taking into account gender-related and democratic issues.</td>
<td>A water committee was established for the Ranen borehole project with the assistance of the Ranen Community Project Officer. The committee is composed of experienced local engineers and community members. The committee organises meetings to increase the awareness and local capacity on water issues as well as on HIV/AIDS. The water committee was also involved in the community recreational centre where they can educate youth about water and sanitation.</td>
</tr>
<tr>
<td>Capacity building and training for maintenance and repairs.</td>
<td>The main objective of the water filter projects in Ghana was to foster a sustainable enterprise through the sale of water filters. EnterpriseWorks collaborated closely with suppliers to increase their capacity to manufacture and supply the filters and with customers to train them to appropriately use the filters. The AMREF project in Mkuranga, Tanzania will provide training for 385 local artisans in water point and sanitation facility construction. It is also establishing local water funds and facilitating bank accounts to operate and maintain the water supplies.</td>
</tr>
<tr>
<td>Regular and accurate reporting and measurements, including target setting and baseline assessments.</td>
<td>WaterAid in Burkina Faso regularly monitors the quality of water and receives information about the numbers and impact on beneficiaries through community volunteers who visit each household three-four times over the project period. In addition, AMREF in Tanzania performed a baseline assessment and established key performance indicators to monitor progress.</td>
</tr>
<tr>
<td>Investigation of geological features.</td>
<td>AMREF in Kechene, Ethiopia has its own technical manager at each site, usually a committee member trained for this purpose. A hydro-geological survey was also carried out.</td>
</tr>
<tr>
<td>Inclusion of local authorities and/or integration with water policies.</td>
<td>Each of the projects in Nigeria were endorsed by the local governor of the area and the national water ministry to ensure the project was integrated into local and national water policies. AMREF in Tanzania is working closely with local government authorities to design, implement and manage existing and new community water sources and environmental sanitation. For this purpose, AMREF also provided training to local government officials, and aims to have by-laws introduced which formalise water associations/groups and their role in maintaining and managing water facilities. This would include outlining the rights and duties of water user groups, duties and obligations of village councils, ward development councils, sanitation and protection of water sources, inspection of sources and water facilities, and theft and damage protection and penalties.</td>
</tr>
<tr>
<td>Financial or in-kind contribution by the community.</td>
<td>In the Ugandan rainwater harvesting project in Kapchorwa implemented by the local NGO ACCORD, benefiting households provided a significant financial contribution compared to their income levels. The community had strong social networks and structures, allowing for this significant financial contribution to be sustainable. It resulted in the construction of 20 additional tanks. In Cameroon, both projects received 10 per cent financial contribution from the community as well as the provision of subsidised technical expertise and labour.</td>
</tr>
<tr>
<td>Integrated and holistic approach – such as sanitation, hygiene and education components.</td>
<td>The Kapchorwa, Uganda rainwater harvesting project also integrated a sanitation and hygiene element. Households had to pass five sanitation and hygiene criteria to qualify for co-funding of a rainwater harvesting tank.</td>
</tr>
</tbody>
</table>
Evaluating sustainability and community ownership provided an insight into the wider social and economic impact of Diageo’s water projects.

The negative health impacts of water scarcity and poor water quality are well established (Rijsberman: 2004). As a result of lack of access to water and sanitation, people suffer from diarrhoeal diseases, killing some two million each year, and over ninety percent are children under the age of five. Infection from malaria, filariasis, schistosomiasis and guinea worm pass through water. Other illnesses result from bad quality water or pollutants, such as arsenic, fluoride, heavy metals, or persistent organic pollutants. Water diseases particularly affect vulnerable people including the infirm, undernourished, HIV/AIDS sufferers, the elderly and children (Rijsberman: 2004).

Because of 1 Million Challenge projects, communities are being empowered through education and capacity building training. For example, in Burkina Faso, the water and sanitation project is improving hygiene within schools which has led to better student health. There is also evidence to show that students are taking what they have learnt back home and teaching their parents and/or other siblings.

Anecdotal evidence collected during the validation study suggests that many beneficiaries have gained health improvements alongside the establishment of the new water source. Many beneficiaries reported previously drinking from contaminated water which lead to illness and in some cases death in small children and the elderly. The improvements in health, as particularly noted in the Kajiado borehole and the Nyanza water tank project in Kenya, also create other health-related benefits such as higher attendance at school, increased productivity and less expenditure on medicines.

The 1 Million Challenge has also created new economic opportunities in several communities. In Tanzania, it was recorded that productivity had increased due to the time saved from collecting water, especially for women. Household wealth also improved due to savings from not having to treat or boil their water. The project also initiated income generating activities which has diversified family income. Many of the 1 Million Challenge projects also provide economic benefits through improved livestock health and better irrigation for subsistence farming. Such was the case for the handpump project in Kisumu, Kenya whereby a local woman was able to develop a small-scale vegetable farm using a pump to irrigate her plot.

These impacts are tangible, but other positive effects from improved water and sanitation are harder to measure. Focus group feedback from some of the projects highlighted that many, particularly women, had gained an increase sense of security. Previously, in Mkuranga, Tanzania, people were afraid of fetching water from the forest because of the presence of a lion near the natural water source which had attacked and killed someone from the village. Having the new water source within the community has eased people’s fears and reduced further risk of dangerous encounters with the lion. Improving the proximity of sanitation facilities can also improve security. In the Kechene district of Addis Ababa, Ethiopia, women previously without access to sanitation facilities reported incidences of attack during night time visits to the underbrush. The attacks ended when the water and sanitation facilities were established near their homes.

Beneficiaries also reported increased community harmony as people no longer fight over limited water resources, such as in Uganda (see case study overleaf). Enhancing people’s lives through health improvements, new sources of income, increased security and social harmony are indirect, but highly valued ways that water contributes to more sustainable and enriched communities.

The following are case studies from Water of Life projects that demonstrate different social and economic impacts of water provision projects.
Case study: Rainwater harvesting centre, Kabale, Uganda

Even though Uganda is blessed with abundant rainfall, for many households, access to water and sanitation is a problem.

To provide a water source that was safe and hygienic for the Kabale community, Uganda Breweries Limited (UBL) donated over 180 million Ugandan Shillings to build the Rainwater Harvesting Training Centre. The centre aims to provide skills for the construction of rainwater harvesting tanks in the area and its environs. UBL, EABL Foundation and the Diageo Foundation partnered with Kigezi Diocese Water and Sanitation Programme (KDWSP) to manage and construct the project. KDWSP worked very closely with the local community in developing and constructing the centre. The centre will now offer training courses aimed at equipping people with skills to construct rainwater harvesting facilities in eight districts of south western Uganda. These include Kabale, Ntungamo, Kisoro, Kanungu, Rukungiri, Isingirio, Kiruhura and Bushenyi. Thus far, 80 artisans have been trained.

Case study: Water filters project, Ghana

Most communities in Ghana currently rely on traditional open wells, streams and other contaminated surface water sources. Only 36 per cent of the rural population has access to improved drinking water and only 35 per cent of urban households have a mains water connection.

Since July 2006, the Diageo Foundation, with contributions from Guinness Ghana Breweries Limited, the Diageo Africa Leadership Conference and Mr Brian Voakes, have funded a ceramic water filters project, implemented by EnterpriseWorks (an international NGO working in Ghana) to develop a commercially viable, replicable system combining water filter distribution with hygiene education. The finances from Diageo were used to setup social enterprise systems and enable philanthropic contributions of water filters to schools and community health centres. The ‘Adukuro filter’, is made from locally procured resources and sold at an affordable rate from local shops. The filter is designed to be filled manually with water taken from the local supply which may be subject to contamination. The filter removes up to 99.9 per cent bacteria and amoeba and 99 per cent of suspended solids. One filter provides clean and safe water to a family of six for one year. Filters are distributed via existing private enterprises who sell the filters at full market value. In order to reach poorer households a voucher system is being developed.

The development of local capacity and income generation through this project has been tremendous. For example, the water filters project co-funded by the Diageo Foundation created an income for the manufacturers and raw material suppliers of US$100,000. The local manufacturers had 15 permanent workers including five women. 150 retailers earned a total commission of approximately US$10,000 from the sale of 5,000 filters. Over a 12-month period, the project helped to improve the health and productivity of about 60,000 Ghanaians including school children and disaster victims through reduction in the incidence of waterborne diseases. Because of the excellent distribution system and the growth of the project as a business, the project will be sustained even without financing from Diageo (EnterpriseWorks: 2007).
Farmers in Northern Nigeria typically farm on small plots of land which require traditional labour-intensive irrigation techniques. This uses up a lot of time and human resources. Treadle pumps are a low-cost and easy-to-use technology.

**Case study: Treadle-pump project, Kaduna and Katsina, Northern Nigeria**

Guinness Nigeria plc has introduced and disseminated human powered treadle pumps and installed hand-drilled tubewells for farmers in nearby communities.

Guinness Nigeria plc funded the pilot project with EnterpriseWorks, an international NGO, to deliver 271 pumps for a total of US $187,750. Each pump can deliver water seven times faster than a traditional bucket on a rope. The introduction of the treadle pump to the community created positive knock-on effects. Standard of living has improved from increased agricultural productivity and local metalworkers have been trained to manufacture and market the pump, thus increasing their income.

Because of the success of the project, there are plans to introduce the farmers to sorghum and maize cultivation. These grains can be sold to the Guinness Nigeria plc breweries, providing a steady source of income for the farmers. Over a 15-month period, the project has worked through two growing seasons in two adjacent northern states (Kaduna and Katsina) and has helped farmers earn as much as US $1,500 a year—double the average annual household income.

(This project was financed by Guinness Nigeria before the 1 Million Challenge and does not contribute to the Challenge as the primary use of water is for irrigation, not drinking).
Lessons

The 1 million Challenge achieved fantastic results in its first year. Numerous success stories demonstrate the large-scale and positive impact Diageo can contribute to communities with a focused strategy. Learning from the challenges encountered along the way has provided Diageo with a sound footing as it strives to continually increase the impact of the 1 Million Challenge. Key lessons were learned in the areas of target setting and selection criteria, project implementation, technology and transaction costs.

Project selection criteria and targets

A key strength of the 1 Million Challenge is that each IMC has ownership of their own Water of Life programme but shares a common goal of reaching one million people across Africa. This enables each IMC to implement the programme in locally appropriate and relevant ways. There were cases where target setting and project selection were challenging, largely because of the novelty of combining the 1 Million Challenge with a variety of approaches.

- An early lesson was the need for a common definition of ‘beneficiary’. Setting targets based on people reached with consistency requires a single definition that can be shared across markets and with implementing partners. However, it has to be flexible enough to accommodate many types of projects.

- A second key lesson has been that large-scale, multi-year projects take time to begin reaching their full target numbers. The first year is most often focused on up-front investment in project staff recruitment, and establishing systems and community engagement. This needs to be taken into account in annual target setting. Rather than an even distribution over the life the project, there will be a steep rise in the number of beneficiaries following the first year. With this in mind, there is also a case for supporting smaller projects, which, with their faster set-up times provide more immediate benefits.

- A related lesson taken from more complex projects, in terms of funding structure or multi-faceted projects which focus on more than just water and sanitation, can take longer than expected to complete. With a focus on achieving large-scale impact quickly, this can be a frustrating experience for those working hard to achieve the 1 Million Challenge. However, some of these projects have the potential to reach far more than simpler models.

Each IMC has ownership of their own Water of Life programme but shares a common goal

Project implementation and management

Other challenges arose during the course of projects. The IMCs are well-placed to learn from these challenges as they tend to play an active role through the life of the projects they support. Sharing this knowledge will help everyone involved in the 1 Million Challenge anticipate and even avoid some of the common challenges that may arise in the future.

Donor and partner communication throughout the life of a project is crucial for reaching targets. The IMCs’ proximity to the projects they fund gives them the benefit of being able to ask the right questions, visit project sites and engage directly with the community.

One example of an issue that can arise and be resolved quickly when the IMCs and partners work together is that of selecting project sites. With one project in Nigeria, a land issue was solved through good communication between the donor, implementing partner and local community.

Donor and partner communication throughout the life of a project is crucial for reaching targets. The IMCs’ proximity to the projects they fund gives them the benefit of being able to ask the right questions, visit project sites and engage directly with the community.
Technology

A variety of different technologies were applied in the 1 Million Challenge, with just as many results. For instance, in one context a borehole might reach a community of 5,000 and in another 100,000, while a third community might find a borehole completely inappropriate. Diageo looks to their implementing partners and local communities to identify the most appropriate technologies for each project. No matter what the technology, some common lessons were drawn from 1 Million Challenge projects:

- The technology must be well-integrated into the community’s water system for its full potential to be realised.
- A chosen technology might be the best solution in a given context, but it might also have weaknesses that need to be addressed within the project design. Rainwater harvesting is an example of a technology that vastly increases water security, however communities may still need to filter or boil the water to ensure its safety.
- Technologies endorsed in government policies or which are familiar to communities are usually easy to deploy and maintain, but innovative new technologies and modifications to existing technology could have added benefits. These benefits need to be balanced against the additional time and resource that is required.

Reducing transaction costs

Diageo’s previous track record in water was crucial to being able to achieve such high impact in the first year of the 1 Million Challenge. All water projects entail some degree of transaction cost, whether monetary, time, trust or efficiency. New projects and partnerships usually have higher transaction costs than those that have established regular systems of working and strong bonds of trust among the partners. Diageo has recognised that it has the ability to lower transaction costs for others through the exchange of knowledge and learnings.

Diageo’s decision to fund a local grassroots NGO called Kaproron Primary Health Care (KPHC) over the years for the rainwater harvesting project in Kapchorwa, Uganda, is a perfect example of how the 1 Million Challenge is not just about donating money to water projects, but about raising the capacity for partners and hence lowering their transaction costs. For example, Diageo’s Whiskey Group recently raised £14,000 through an internal fundraising auction for a third phase rainwater harvesting project in Kapchorwa, which also includes the provision of a motor cycle, computer and monitoring and evaluation training courses. Because of all this, KPHC is now on the verge of becoming a professional NGO.

Diageo will endeavour to identify where transaction costs can be reduced through stakeholder analyses and creating enabling environments for partners, as seen in the example above. As well as increasing local capacity, Diageo is also well placed to identify how it can create an enabling environment for partners to implement sanitation and hygiene elements to projects.
Way forward

The experience and evaluation of the 1 Million Challenge’s first year will provide Diageo with new tools to reach even greater numbers of people and achieve even higher levels of sustainability and community ownership in years to come. Going forward, Diageo and its IMCs will work together with implementing partners to focus on five key areas: implementing common standards and criteria whilst retaining the strengths that result from locally-appropriate solutions; developing a handbook that formalises the agreed standards; enhancing the impact of supply-site projects; strengthening the business case for investing in community water projects across more of Diageo’s businesses; and forging new partnerships.

Standard definitions and criteria

One of the key lessons learned in the first year of the 1 Million Challenge is that no single approach or technology can be universally applied to achieving the target. Applying the lessons of the first year will however give everyone involved in the 1 Million Challenge tools to help guide future project selection.

There were as many average costs per head as there were projects, and Diageo expects this to be the case going forward as well. It is a reflection of the variety of contexts that exist on the ground. Diageo will continue to measure and track this data. Over time it will be possible to establish a clearer range to guide project selection based on reasonable costs and where further investigation is required.

Numerous and varying factors determine the cost per head of a project. These factors are hard to typify and standardise and it would not be in the best interest of the sustainability of the projects to do so. However, Diageo was able to establish that a great deal of the variation in cost per head can be accounted for to the extent a project’s investment ensured elements of sustainability and community ownership, and to the extent of sanitation and hygiene were incorporated. Diageo recognises the major role of sanitation plays in sustainable and effective water projects, but as the focus of the 1 Million Challenge is on drinking water provision, the company will look for co-funding partners for these types of projects going forward.

Applying a consistent definition to what it is meant by ‘beneficiary’ is possible and will facilitate target setting and evaluation going forward, as well as aligning IMCs and their implementing partners to a common goal. Diageo will employ the following definition of a beneficiary moving forward:

Beneficiaries are defined as those people with access to at least 10-15 litres of improved drinking water per day. Ideally, beneficiaries will live only 500m from the water source. In rural areas, beneficiaries are those living within two kilometres of the water source. Improved drinking water includes: piped water into a dwelling, plot or yard; a public tap/standpipe; a tube well/borehole; a protected dug well; a protected spring; rainwater collection; water filtration and purification.5

Diageo will be applying this definition from now on, but will continually reassess the relevance of the definition as the overall water and sanitation landscape develops.

For the purposes of reporting against the MDGs, Diageo notes that water filtration and purification mechanisms are not included as improved water sources as defined by the WHO UNICEF Joint Monitoring Programme. However, in response to community need, these technologies have a place in Diageo’s 1 Million Challenge.

Cost per head

The average cost per head for all validated projects in 2007 was £3.96.

The range of costs per head was: £16.33 for the rainwater harvesting project in Kapchorwa to £0.18 for the borehole project in Ranen, Kenya.
To help ensure that all projects achieve high levels of sustainability, the common factors identified in the first year validation will be used going forward in project selection. Diageo will select projects based on the following sustainability criteria, favouring projects which meet at least nine out of ten:

<table>
<thead>
<tr>
<th>Project selection sustainability criteria</th>
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<tbody>
<tr>
<td>1  Community-driven</td>
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<tr>
<td>2  Locally appropriate and accepted technology</td>
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<tr>
<td>3  Environmental sustainability and geological surveys</td>
</tr>
<tr>
<td>4  Integration with existing national water system, water policies and government authorities</td>
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<tr>
<td>5  A sanitation and hygiene component, or the ability for Diageo to enable this component with a partner. Examples include training, sanitation facilities, or education in sanitation and hygiene</td>
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<tr>
<td>6  Community capacity building and education</td>
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<tr>
<td>7  Establishment of a water committee incorporating gender-related and democratic issues</td>
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<tr>
<td>8  Capacity for maintenance and repair</td>
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<tr>
<td>9  Track record of accurate and regular reporting from implementing partner</td>
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<tr>
<td>10 Adequate water quality and regular testing</td>
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</table>

Finally, Diageo will ask implementing partners to help it apply the new standards in baseline assessments at the outset of any new project. This will mean that a key focus in 2008 will be the communication of criteria, definitions and standards to all involved in the 1 Million Challenge and engagement with external stakeholders and implementing partners to explain the importance of these criteria for making, and measuring, a large and lasting impact in water.
One way of achieving this is by empowering the IMCs with a formalised toolkit for taking forward the lessons of 2007. It will include:

I. Definition of beneficiary
Beneficiaries are defined as those people with access to at least 10-15 litres of improved drinking water per day. Ideally, beneficiaries will live only 500m from the water source. In rural areas, beneficiaries are those living within two kilometres of the water source. Improved drinking water includes: piped water into a dwelling, plot or yard; a public tap/standpipe; a tube well/borehole; a protected dug well; a protected spring; rainwater collection; water filtration and purification.

II. Main priority of new projects
The main priority of new projects is to provide an improved source of drinking water to as many people as possible. Other elements such as sanitation and hygiene are vital components for the sustainability and effectiveness of water projects. Therefore, as much as possible, Diageo should find partners to co-fund these elements and encourage an enabling environment for sanitation issues to be prioritised alongside water issues, such as through advocacy activities.

III. Water of Life project standards
- A baseline/assessment study has been done in the project area
- Nine out of ten sustainability criteria have been reached
- The target number of beneficiaries reflects the agreed Diageo definition of ‘beneficiary’
- The project fits in with the IMC business case (see next page for detail)
- Co-funding opportunities have been investigated such as sanitation components of a project.

IV. Sustainability project selection criteria
- Community-driven
- Locally appropriate and accepted technology
- Environmental sustainability and geological surveys
- Integration with existing national water system, water policies and government authorities
- A sanitation and hygiene component – training, sanitation facilities, or education
- Community capacity building and education
- Establishment of a water committee incorporating gender-related and democratic issues
- Capacity for maintenance and repair
- Track record of accurate and regular reporting from implementing partner
- Adequate water quality and regular testing.
Supply sites

Diageo has also examined its production sites in Africa, which are located in or near communities and often have their own boreholes for water supply. Diageo’s IMCs are members of these communities themselves and believe in providing community access to the water supply. However, to date this access has not been measured or monitored. The validation study has helped Diageo to establish guidelines for its IMCs to integrate local access into the 1 Million Challenge.

These guidelines include metering, monitoring water quality, engaging the local community with a view to expanding access, and reviewing impact and progress in line with the 1 Million Challenge standards and criteria.

Building the business case

The greatest contribution towards achieving the 1 Million Challenge targets has come from IMCs with strong businesses cases for prioritising investments to Water of Life projects within their Enriched Communities strategy. Water of Life has moved beyond purely philanthropic giving in these markets and has resulted in a business benefit – enhanced government relations in Nigeria, enhanced community relations in Kenya and building employee motivation and pride in Venture Africa.

Diageo’s approach gives each IMC the flexibility to implement the programme in locally appropriate ways. This ability to take full ownership creates a sense of empowerment and pride that maintains momentum throughout the organisation, which is strongest where current and past achievements are recognised. Diageo will continue to assist IMCs to build and strengthen their unique business cases by providing research, sharing successes across the business and with external stakeholders, and facilitating partnerships with NGOs and other donors.

Example: Employee motivation and pride

The 1 Million Challenge throughout 2007 has proved successful in galvanising employee enthusiasm and pride. The challenge creates a powerful sense of ‘making a difference’ among all Diageo employees and builds staff morale. As was the case in the two large employee fundraising initiatives Diageo initiated during 2007 - the Nile Miles campaign and the Whiskey Group auction. The Nile Miles campaign raised nearly £90,000 for the AMREF project in Mkuranga, Tanzania and the Whiskey Group Auction raised £14,000 for the third phase of the rainwater harvesting project in Kapchorwa, Uganda which costs a total of £43,000.

Water of Life and corporate citizenship programmes in general are powerful tools for retaining top talent and capturing the best new recruits as employees are increasingly expecting their employers to be responsible and ethical in all their operations.

Moving forward, the opportunities to utilise the 1 Million Challenge as an employee engagement tool are numerous. As well as building staff morale and pride, Diageo plans to arrange ‘skills exchange’ programmes with implementation partners. These programmes can increase staff awareness on water issues as well as transfer specialist skills and mentoring to support community partners and delivery of Diageo funded water projects.

Diageo has set up the 1 Million Challenge Trust for employees to fund raise and donate at any time of the year.

Forging partnerships

Diageo Africa has recognised that to ensure the sustainability and momentum of the 1 Million Challenge until 2015, it must be embedded throughout the business. It must go beyond a simple commitment to water provision inspired and directed by individuals, and it must become self-sustaining within the company.

The benefits of partnerships have been highlighted throughout this report – the success of the 1 Million Challenge in 2007 depended on fantastic implementing partners. It is clear that partnerships are the key to moving the 1 Million Challenge forward year on year. Diageo will look for partnerships to leverage co-funding to extend the impact of the 1 Million Challenge to even more communities. Partnerships where the overall approach of the 1 Million Challenge can be shared, formalised and replicated, build momentum both within and outside of Diageo.

As a partner, Diageo offers:

- Strong local networks, including influential decision makers at the national and local level, that help in identification and implementation of suitable projects in Africa;
- A good reputation derived from long-term experience and successful investments in capital projects in Africa;
- Access to governments and credibility with donors to secure extra funding and galvanise key stakeholders into action;
- Engaged and supportive employees; and
- Earmarked corporate citizenship funds with a focus on ensuring that projects are well implemented.

Action in 2008

2008 will be a particularly important year for Diageo as the lessons from the first year of the 1 Million Challenge are brought to life. Already, the company is working to extend the 1 Million Challenge into more African countries, and the company will shift annual reporting to the financial year, further embedding the initiative into Diageo’s results-driven culture.

In the first year of the 1 Million Challenge, Diageo’s reflection on its performance has strengthened its belief that targets can inspire and motivate people to achieve amazing results. Diageo has demonstrated what can be done with the right combination of commitment, support and partners. The experience has strengthened Diageo’s resolve to continue increasing its impact in water in line with the MDGs in Africa, and beyond.
africapractice conducted the assessment of Diageo Africa’s Water of Life ‘1 Million Challenge’ during 2007 and continues to provide ongoing support for the Water of Life initiative. The company also works with Diageo Africa on communications and advocacy activities to promote the importance of water provision among key stakeholders and policy makers.

africapractice is a corporate citizenship and strategic communications consultancy. We blend project management and consulting disciplines with an intimate knowledge of environment, communities and business in Africa. Our network operates out of hub offices in Nairobi, Lagos, Accra and Johannesburg, each hub managing affiliate offices in their region.

Our Corporate Citizenship Practice supports clients in devising and implementing integrated strategies and meeting the increasing demands for corporate responsibility by stakeholders. Drawing on local knowledge, local expertise and our own corporate citizenship consultants, we deliver, monitor and evaluate bespoke corporate social responsibility solutions to our clients.

africapractice’s corporate citizenship consultants have experience in community water provision, carbon finance, environment and development, corporate governance, auditing against the Good Corporation Standard and corporate reporting.

africapractice would like to acknowledge and thank all who were involved in the production of this report.
# Appendix I – Validation matrices

## 1.1 Kenya

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## 1.6 Ghana

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Available documentation at time of validation:
- [ ] Received
- [x] Awaiting
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The project provides water from three rehabilitated boreholes with diesel-powered generators for nomadic Masai communities in a semi-arid area, reaching 4,000 people. It included the establishment of water committees and extensive training for water committee members, borehole operators and community members on sanitation, achieving a high level of community involvement and ownership. The project management includes good records for levy collection, local capacity for maintenance and repairs as well as safe storage of necessary spare parts within the project area and has therefore achieved a high level of sustainability.

**Project status at time of visit**
Complete (fourth borehole planned but delayed by major landslide on planned site).

**Project partner and contact**
AMREF
Luisa Hanna, lhanna@amrefuk.org
+44 (0)20 7269 5529

**Project dates**
Start: July 2006
Completion: Dec 2007

**Number of beneficiaries**
Validated: 4,000
Originally: 5,000
Percentage reached: 90 per cent

**Method used to validate the number of beneficiaries**
Number of households multiplied by average number of households per borehole (12x3x120=4,320) as well as information obtained from community elders, records from operator and project partner. This number was crosschecked with existing water usage which amounts to 50l/person/day including use by livestock. Due to the nomadic lifestyle of the Masai, the catchment area of the borehole is significantly higher during the dry season, particularly with regard to livestock.

**Population in the area**
Official census not available.

**Average household size in project area**
12 (about 375 households).

**Funding**
Required: £42,300
Source of Funding: In market (EABL Foundation)
Cost per Person: £10.58

**Technology**
Borehole rehabilitation with diesel generators.

**Most common water sources in the area**
Open wells and dams, limited and sparse water supply during dry season, next borehole about 20km away.

**Used in Conjunction with the Project**
Yes.

**Water quality of project**
Taste is satisfactory. Test results from laboratory have been requested.

**Current capacity**
225m³ (3 tanks of 75m³)

**Current use**
225m³ (3 tanks of 75m³)

**Available documentation**
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results

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2 Original number of beneficiaries of project with four boreholes
Success stories and best practice
- Community-driven: Project originates from request by women who were disproportionately affected by the lack of adequate water supply and sanitation facilities
- Community-owned: Mobilisation for cost sharing and participation at all stages of the rehabilitation process
- Capacity building: Strong training component in a culturally difficult context – community’s own resource persons, management committees, water operators and trainers of trainers in hygiene
- Cultural sensitivity: Hygiene education carefully introduced, including separate sanitation facilities at borehole sites which are otherwise not available.

Lessons learned
- Population was slightly overestimated because AMREF Kenya had defined beneficiaries as those travelling more than 2km from their dwelling, as well as work on the fourth borehole being stalled due to a landslide.
This government-driven project provides water to 2,000 people in Nyandarua district through a newly established borehole with electricity powered generator and 24m³ water tank and several piped fetching points. While the project uses a standard approach, it addresses a dire need for the access of safe water as the local river is more than 5km away, polluted by pesticides, (from greenhouses upstream) and no other major water sources are available for the community. While the project was still underway at the time of the project visit, there was strong indication that all necessary steps were taken to ensure a sufficient level of community ownership and sustainability of the project.

**Project status at time of visit**
50 per cent

**Project partner and contact**
District Water Office
Contact: Mr Gayko, Mr Mwangi Nyahururu
Phone: +254 (0)65 22202

**Project dates**
Start: 2006
Completion: Dec 2007

**Number of beneficiaries**
Validated: 2,000
Originally: 3,000
Percentage reached: 67 per cent

**Method used to validate the number of beneficiaries**
The information obtained from the implementation partner and governmental official was cross-checked with the information from community representatives, a transect walk to establish population density and the reach of the planned fetching points as well as a visit to the local primary school and dispensary.

**Population in the area**
Official census not available.

**Average household size in project area**
10

**Funding**
Required: £10,693
Source: In market (EABL Foundation)
Cost per person: £5.35

**Technology**
Borehole construction with electric generator pump.

**Most common water sources in the area**
Nearby rivers

**Used in conjunction with the project?** Yes

**Water quality of project**
Yet to be tested.

**Current capacity**
Borehole yield 15m³/h=360m³
(tested by government authorities)

**Current use**
24m³ tank planned

**Available documentation**
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results
Project history
Borehole drilled in December 2006. Project delayed due to lack of funding but completed by December 2007.

Structure of visit
- Meeting with government official at borehole
- Site inspection including visit to primary school and local dispensary, transect walk through community, and group interview with locals and project manager.

Project setup
- Electricity-powered borehole (150m deep) with connection to mains
- 200m piping to 24m³ water tank with piping to village
- Community will charge levy.

Levy collection and use
Yet to be set by community.

Water committee
Structure in place but limited activity due to project delays; most of the community did not seem to be aware of the project due to the early stage of implementation.

Capacity for maintenance and repairs
No training of operators as of July 2007.

Official handover
Planned for 2008.

Sustainability and community ownership
Aggregate score: 28
Overall rating: Medium

Water policy integration and involvement of governmental organisations
High level, as driven by government agency.

Success stories and best practice
- This project was implemented in partnership with the government. A local MP facilitated the relationship between EABL Foundation, the government and the beneficiaries.

Lessons learned
- Project suffered delays due to payment system not being sufficiently robust to deliver funds as well as experiencing geological difficulties.
The project involves six water tanks on 6m-high concrete stands to store water for three local dispensaries for two weeks as municipal water provision is alternating across the district within this period.

The project was implemented in collaboration with the District Office and is highly integrated into the existing large-scale Gatanga community water scheme. While tanks seem like a promising technology to provide drinking water, the actual impact is very limited. The project improves access to safe water for the patients of the dispensaries but does not provide access to safe water for the wider community.

**Project status at time of visit**
Complete

**Project partner and contact**
Gatanga Constituency
Elizabeth Mwangi, CDF Manager
enwangi@gatanga.com, +254 726 9109 934

**Project dates**
Start: May 2007
Completion: June 2007

**Number of beneficiaries**
Validated: 2,000
Originally: 20,000
Percentage reached: 10 per cent

**Method used to validate the number of beneficiaries**
Instead of taking the catchment area of the dispensaries into the calculation, the average number of in- and out-patients for each dispensary as well as additional beneficiaries such as members of staff and neighbouring households were used to form the validated number.

**Population in the area**
102,000

**Average household size in project area**
10

**Funding**
**Required:** £1,660
**Source:** In market (EABL Foundation)
**Cost per person:** £0.83

**Technology**
Six water tanks at local dispensaries.

**Most common water sources in the area**
River and open wells

**Used in conjunction with the project?** Yes.

**Water quality of project**
Chlorinated river water; however, chlorination plant out of order at time of visit but repair in process.

**Current capacity**
6x 5m³ = 30m³

**Current use**
Same as capacity

**Available documentation**
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results
Project history
After the purchase of the tanks, the project was delayed due to the lack of concrete stands available, which are necessary to create the gravitational-fed system to distribute water to the dispensary. The Constituency Development Fund (CDF) funded the installation of the tanks.

Structure of visit
- Meeting with CDF Manager
- Visit to one dispensary and interview with director
- Visit to main storage tank, treatment facility and river intake
- Interview with technician.

Project setup
The Gatanga Water Scheme covers an area of 251 km², using an intake from the Kimakia River at a high elevation point with a reservoir and water treatment facility. Due to current constraints of the piping system, the water provision alternates between different communities requires the installation of water tanks to ensure constant water supply. Three dispensaries were therefore equipped with two elevated tanks of a capacity of 5 m³ each.

Levy collection and use
n/a

Water committee
Board of Gatanga Community Water Scheme.

Capacity for maintenance and repairs
n/a

Official handover
End of 2007

Creation of economic opportunities
None recognised

Health impact
Significant as patients at the dispensary directly benefit from the safe water, which also serves as a tool for hygiene and health education.

Sustainability and community ownership
Aggregate score: 26
Overall rating: Medium

Water policy integration and involvement of governmental organisations
Project is run by CDF manager and fully integrated in Gatanga Community Water Scheme.

Success stories and best practice
- The project was implemented in collaboration with the District Office and is highly integrated into the existing large-scale Gatanga Community Water Scheme.

Lessons learned
- While tanks seem like a promising technology to provide drinking water, the actual impact is very limited. The project improves access to safe water for the wider community but does not provide access to safe water for people who did not have adequate access previously.
1.1.4 **Hand Pumps** Kisumu, Nyatigo, Kenya

The project provides water to 3,000 people in rural farming communities close to Lake Victoria through small boreholes with hand pumps. While the project suffered an early setback from the embezzlement of funds by the original implementation partner, the direct involvement of grassroots organisation following the recovery of the funds greatly aided the project. The engagement of local womens’ organisations in particular created a better understanding of the need and use for more adequate water supply. The resulting water supply opened up opportunities for economic development and independence, allowing women to farm vegetables by using the water for irrigation.

**Project status at time of visit**
Complete

**Project partner and contact**
Henry Ndede, UNEP
henry.ndede@unep.org

**Project dates**
Start: June 2006
Completion: October 2006

**Number of beneficiaries**
Validated: 3,000
Originally: 3,000
Percentage reached: 100 per cent

**Method used to validate the number of beneficiaries**
Information provided by the implementation partner, confirmed by a visit to benefiting communities within a 2km radius. The information obtained from the levy collection system as well as a government official and the local patron confirmed that about 140–150 households with an average of six people per household were served by each of the hand pumps.

**Population in the area**
504,359 (Kisumu district, 1999 census)

**Average household size in project area**
6

**Funding**
Required: £14,361
Source: In market (EABL Foundation)
Cost per person: £4.79

**Technology**
Boreholes and three hand pumps.

**Most common water sources in the area**
Traditional wells

**Used in conjunction with the project?** No – the water provided from the hand pump is sufficient of all beneficiaries throughout the year.

**Water quality of project**
Officially tested and approved but has slight mineral taste.

**Current capacity**
Three hand pumps, each pumped six hours per day.

**Current use**
Three hand pumps, each pumped six hours per day.

**Available documentation**
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results
Project history
The original partners KICK, were not in a position to take the project forward due to internal financial issues. UNEP and the CBOs are now fully managing the project.

Structure of visit
- Reception at first hand pump, including 1-2 hours interview session with all members of the women’s group and government official
- Interviews with operators and users at the two other hand pumps
- Meeting with village patron/financial supporter.

Project setup
Three boreholes with hand pumps, all lockable and fenced

Levy collection and use
KSh 20/month for members (£0.16)
KSh 1/20l for non-members (£0.01)

Water committee
Yes

Capacity for maintenance and repairs
Information not available.

Official handover
October 2007

Creation of economic opportunities
Yes – local woman could develop small-scale vegetable farming by using hand pump water for irrigation.

Health impact
None recorded.

Sustainability and community ownership
Aggregate score: 37
Overall rating: High

Water policy integration and involvement of governmental organisations
To be investigated further.

Success stories and best practice
- Engaging and prioritising local women’s organisations created a better understanding of the need and use for more adequate water supply. The provision of water opened up opportunities for economic development and independence, allowing women to farm vegetables by using the water for irrigation.
- Community members were also educated about hygiene and sanitation. For example, they are aware that the latrine must not be in close proximity to the borehole and particularly more than 500m uphill from the borehole.

Lessons learned
- Accounting and use of funds was not sufficiently transparent which led to their misuse. However, this problem was remedied with the assistance of UNEP.
- Water quality does not seem to be adequate for two of the three boreholes which highlights the need to obtain water test results and provide funds for cleaning of boreholes or if that is not sufficient, to replace the metal with plastic casing within the borehole.
1.1.5 **Borehole Ranen, Nyanza District, Kenya**

This community-driven project provides safe drinking water from a borehole powered by an electric generator connected to the power grid. The water is pumped to a 100m³ reservoir at the highest elevation point in the area which allows for wide distribution. The project idea originated from the community and hence is highly suited to their needs. Due to the high community involvement from an early stage the project scored high for community ownership. In addition, the professional background of some of the water committee members and the high level of determination has created an exemplary project set-up and management.

Close cooperation with local MP also led to a high level of water policy integration and involvement of governmental organisations at the on-set of the project. While the local MP also assisted in securing a majority of the funding from the Constituency Development Fund (CDF), the project implementation was delayed by funding issues for first and second phases.

**Project status at time of visit**
50 per cent

**Project partner and contact**
Ranen Community
George Owino Jonyo, Chairman
Mobile: +254 720 825 120
Kenneth O. Wagumba, Project Secretary
Mobile: +254 722 608 711
Gulf Agricultural Developers
Joash O Odomi, Project Manager
Mobile: +254 733 329 869
Hon. Ochilo Ayacko, MP, Rongo/CDF
Phone: +254 20 221 291

**Project dates**
Start: August 2007
Completion: Planned for January 2008, but delayed due to current Kenyan political situation.

**Number of beneficiaries**
Validated: 60,000
Originally: 15,000
Percentage reached: 400 per cent

**Method used to validate the number of beneficiaries**
Information obtained by community representatives and elders, transect walk to establish population density as well as current availability of water and capacity of the borehole. About 10,000 households with an average size of six people per household will benefit from the project.

**Population in the area**
Official census not available.

**Average household size in project area**
6

**Funding**
**Required:** £10,949
**Source:** In market, EABL Foundation
**Cost per person:** £0.18

**Technology**
Borehole with tank pumps by an electric generator and distributed via pipes.

**Most common water sources in the area**
River water and unprotected wells
**Used in conjunction with the project?** Limited. Water quality of wells, the amount available and the distance of the community from the river will incentivise community members to use the borehole water.

**Water quality of project**
Test results from Government’s Chemist Department: ‘Good water, recommended for domestic use.’
Current capacity
Borehole: 60m³/h = 1440m³/day; tank 100m³

Current use
Not applicable as project is not at a stage for usage to be assessed.

Available documentation
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results

Project history
Ranen community developed the project by themselves in September 2006 and consequently approached EABL Foundation through local MP. EABLF agreed to provide co-funding together with the Constituency Development Fund.

Structure of visit
- Meeting with project engineers
- Meeting with community representatives and members at borehole site;
- Overview of potential area to be served, including transect walk to market in main village, visit to prospective kiosk site and interviews with community members
- Final meeting with community representatives.

Project setup
87m deep borehole at foot of hill, generator to be connected to power grid, 100m³ tank on top of high hill with distribution system and two water kiosks.

Levy collection and use
Yet to be determined at the time of visit

Water committee
Strong community structure. Well-educated, elected committee driving the whole process. Election of members by the community.

Capacity for maintenance and repairs
Yes – experienced engineers are part of the water committee.

Official handover
Planned for 2008

Creation of economic opportunities
To be investigated further.

Health impact
To be investigated further.

Sustainability and community ownership
Aggregate score: 39
Overall rating: High

Water policy integration and involvement of governmental organisations
Cooperation with local MP and CDF led to a high level of water policy integration and involvement of governmental organisations at the onset of the project.

Success stories and best practice
- The project idea originated from the community and has therefore an excellent level of community ownership
- Professional background of some committee members and high level of determination has created and contributed to exemplary project set-up and management
- Water Committee also organise meetings to increase awareness and capacity on water issues and HIV/AIDS while also being involved in the establishment of recreational centre for community.

Lessons learned
- Project was delayed by late release of funding for first and second phases.
The borehole provides access to safe drinking water for a community that has currently only a river and few open wells for its water supply. In addition, the high yield of the borehole, together with the existence of an old piping system underground, provides a significant up-scaling opportunity. The level of community involvement and sustainability of the project could not be assessed at the time of the project visit due to the early stage of the project.
Project history
The first drilling attempt for the borehole failed as no water was found. Exploration of a nearby site led to the extraction of a borehole with very high yield.

Structure of visit
- Meeting with project engineer and village chief.
- Inspection of borehole site, including transect walk to identify current water sources and use.

Project setup
Borehole with tank and fetching points.

Levy collection and use
Yet to be determined at the time of visit.

Water committee
In place but not active as of yet.

Capacity for maintenance and repairs
Yet to be determined at the time of visit.

Official handover
Planned for 2008.

Creation of economic opportunities
The water will also be used for a water/milk cooler just opposite the borehole.

Health impact
To be investigated further.

Sustainability and community ownership
Aggregate score: N/A
Overall rating: N/A

Water policy integration and involvement of governmental organisations
To be investigated further.

Success stories and best practice
Not applicable as project is not advanced enough to be assessed.

Lessons learned
- Project was initially stalled due to delayed release of funding, which decreased the level of community involvement.
1.1.7 Borehole and Water Dams
Karaba, Mbeere District, Kenya

The project provides access to safe drinking water for local communities in the arid and semi-arid area of Mbeere District. The project includes a borehole with tank and fetching points as well as the rehabilitation of four earth dams to collect surface water. Government agencies have been consulted with regard to the project design and location of the earth dams and community members will make contributions during dam construction.

Project status at time of visit
50 per cent

Project partner and contact
Karaba Water Projects
Sammy Kitka, Chairman
Mobile: +254 721 62684

Mbeere District Water Officer
Mobile: +254 733 566 961

Mr Kamau, Geologist, Mbeere District
Mobile: +254 7234524

Project dates
Start: October 2007
Completion: Planned for January 2008

Number of beneficiaries
Validated: 25,000
Originally: 50,000
Percentage reached: 50 per cent

Method used to validate the number of beneficiaries
The method used included a visit to each of the earth dams, the establishment of the average number of households within 2km of each earth dam and an estimation of the number of beneficiaries from the borehole with regard to the level of population density. The main indicator used to cross check the information provided by the original implementation partner was the number of households, this varied among the different project sites (500 households for the borehole and 350, 400, 450 and 550 for the earth dams). The total number of households multiplied with the average number of people per household for the project area together with additional beneficiaries from four schools with students coming from further away resulted in the validated number.

Population in the area
500,000 (estimate)

Average household size in project area
11

Funding
Required: £30,657
Source: In market (EABL Foundation)
Cost per person: £1.23

Technology
One Borehole and three earth dams to collect surface water.

Most common water sources in the area
Canal for rice plantations and standing water in open wells.
Used in conjunction with the project? Likely

Water quality of project
Current chemical data not available.

Current capacity
To be investigated further.

Current use
Project is not at an advanced enough stage to assess its current usage.

Available documentation
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results
Plan International, an international NGO operating in Kenya, originally proposed a borehole in the region but pulled out because of an internal policy on working with alcohol companies. The Diocese of Embu consequently took over the project to secure the funding from EABL Foundation which will help to establish improved access to drinking water for communities in dire need.

Structure of visit
- Visit of earth dams with chairman of water committee
- Interview with individuals about their current water sources and use. Group interview with residents close to one of the earth dams, concluding with discussion with water committee members.

Project setup
Borehole with tank and fetching points. Earth dams rehabilitated to collect surface water, the original dams date back more than 20 years. Ponds are protected from pollution and contamination, however water is still accessible for livestock.

Levy collection and use
No collection for earth dams. Borehole levy to be determined.

Water committee
Well-established water committee in place which drives the implementation process.

Capacity for maintenance and repairs
To be investigated further.

Official handover
Planned for 2008.

Creation of economic opportunities
Livestock is a very important income source in the area. The earth dams will provide more continuous and accessible water supply for this purpose.

Health impact
The majority of people are currently suffering from water-borne diseases, particularly when they have to use standing water that is also shared with livestock. The health impact cannot be assessed adequately due to incompletion of project.

Sustainability and community ownership
Aggregate score: 33
Overall rating: High

Water policy integration and involvement of governmental organisations
Government agencies have been consulted with regard to the project design and location of the earth dams.

Success stories and best practice
- Community members will make in-kind contributions during dam construction.

Lessons learned
- Project was delayed due to difficulties with original project partner and additional delays in release of funding.
The project has provided six water tanks to three local dispensaries that were lacking adequate facilities for continuous water supply as service from the water mains is often interrupted.

While water tanks seem like a promising technology to provide drinking water, the actual impact is very limited. The project improves access to safe water for the patients of the dispensaries but does not provide access to safe water for people who previously did not have adequate access to safe drinking water.

**Project status at time of visit**
Complete

**Project partner and contact**
Rongo Constituency Development Fund (CDF)
Francis Ogutu Onyango, Accountant
Mobile: +254 725 912 723

**Project dates**
Start: January 2007
Completion: July 2007

**Number of beneficiaries**
Validated: 500
Originally: 50,000
Percentage reached: One per cent

**Method used to validate the number of beneficiaries**
Instead of using the catchment population of the dispensaries the average number of patients per day for each dispensary was used to establish the number of beneficiaries.

**Population in the area**
Official census not available.

**Average household size in project area**
10

**Funding**
Required: £1,660
Source: In market (EABL Foundation)
Cost per person: £3.32

**Technology**
Six 5m³ tanks to store rainwater or water from sporadic supply from municipalities.

**Most common water sources in the area**
The dispensaries use additional water tanks and rainwater harvesting to ensure the water supply.

**Used in conjunction with the project?** Yes

**Water quality of project**
All water is treated with Water Guard, a water purification solution.

**Current capacity**
6x5 m³=30m³

**Current use**
6x5 m³=30m³

**Available documentation**
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results
**Project history**
EABL Foundation purchased the water tanks for the benefit of the local dispensaries and their catchment population, the CDF funded and implemented the installation.

**Structure of visit**
- Meeting with representative from the CDF
- Visit to all three dispensaries, inspection of tanks and interview with warden.

**Project setup**
Six water tanks installed at three dispensaries to enhance their storage facilities for continuous water supply.

**Levy collection and use**
None

**Water committee**
None

**Capacity for maintenance and repairs**
None

**Official handover**
None

**Creation of economic opportunities**
No opportunities recorded.

**Health impact**
The communities currently suffer from very polluted water sources which will be improved significantly through the project but the health impact is not yet measurable due to the very early stage of the implementation at the time of the project visit. But there will be significant health impacts for in-patients.

**Sustainability and community ownership**

Aggregate score: 26

Overall rating: Medium

**Water policy integration and involvement of governmental organisations**
To be investigated further.

**Success stories and best practice**
- The water is provided for free at all dispensaries and all patients and visitors can learn about the importance and value of clean drinking water.

**Lessons learned**
- Providing tanks is only part of the solution and has only indirect impact on the community as a whole
- The number of beneficiaries can only be determined on the basis of the average number of in-patients, outpatients and visitors per day, not by the catchment area, as the community members benefit only partially.
1.1.9 Borehole Nzueni, Wote Division, Makueni District

The project provides water to a rural community through a borehole with a diesel-powered generator and pump. The project rehabilitated an existing borehole and established a distribution structure with a 60m³ tank. Water is distributed from six water kiosks across the area, reaching 8,000 people at a cost of £4.63 per person. While the project did not achieve the original number of beneficiaries, it achieved a high level of sustainability and community involvement as well as a significant additional impact on hygiene and sanitation education.

Project status at time of visit
Complete

Project partner
AMREF
Luisa Hanna, l.hanna@amrefuk.org
+44 (0)20 7269 5529

Gerald K. Rukunga, Programme Manager
rukunga@amrefke.org
+254 722 496 269

Project dates
Start: 2005
Completion: 2006

Number of beneficiaries
Validated: 8,000
Originally: 55,000
Percentage reached: 18.18 per cent

Method used to validate the number of beneficiaries
The number of beneficiaries was established using the average household size (of 10 people) and the number of households served by the project (795 households) plus a local dispensary's catchment area of 100km and three schools with about 750 students. The number of beneficiaries is also confirmed by the amount of water used per day (120m³), which provides 15l/person/day in addition to other water sources in use.

Population in the area
8,000 (community only)

Average household size in project area
10 (795 households)

Funding
Required: £37,000 (KSh 5m)
Source of Funding: In market – EABL Foundation
Cost per Person: £4.63

Technology
Borehole rehabilitation with hand pumps.

Most common water sources in the area
Collection of surface and rain water: shallow ponds, dams, domestic rainwater harvesting tanks.

Used in Conjunction with the Project?
Yes

Water quality of project
Water tastes salty; beneficiaries prefer other water for drinking such as harvested rainwater and water vendors if affordable.

Current capacity
360m³/day (if pumping for 24h)

Current use
120m³/day (2x4h pumping/day, excluding water supply tank for livestock).

Available documentation
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results
Project history
The first borehole constructed in 1950 failed due to the community lacking the skills to maintain the new asset. Another borehole was constructed in 1998 but this too failed due to a lack of communication and resources between the implementation partner and the community. This project proposed for funds to be used to rehabilitate the existing borehole by installing a pump and distribution system.

AMREF started working in the district in 1983, primarily on community health care. Erratic rainfall caused water and sanitation-related diseases as well as problems with food security. Due to these conditions AMREF also constructed a new borehole in the same geological area (within 5m of old boreholes). AMREF worked with the Ministry of Water and used some of the existing water infrastructure to provide safe and adequate water as well as hygiene education.

Structure of visit
- AMREF Makueni district office
- Interview with water committee at borehole site
- Transect walk along piping system to water storage tank, including water kiosk and sample interviews
- Visit of local dispensary

Project setup
- Borehole with water kiosk and 40m³ tank for livestock close by
- Water pumped through 3.5 km pipe to 60m³ elevated tank
- Delivery to five kiosks/fetching points through distribution lines totalling 8km of pipe using a gravity-fed system
- Training of two hygiene trainers, two machine operators and kiosk attendants; and working with the existing water committee and community patron (usually a wealthy business person or financier of the community)
- Project also serves one secondary school, two primary schools, one dispensary and four market centres
- Reduced distance to a water fetching points from 5-10km to not more than 2km for most households.

Levy collection and use
Yes (KSh 3/20l) – levy used for kiosk staff, two operators, night guard, diesel for pump generator and savings for major breakdown.

Water committee
Yes – six members, elected by community for two years, 50 per cent women, received administrative and water and sanitation training.

Capacity for maintenance and repairs
Two operators trained; savings from levy for spare parts

Official Handover: Yes

Sustainability and community ownership
Aggregate score: 38
Overall rating: High

Water policy integration and involvement of governmental organisations
High – Ministry of Water was consulted for project design; project registered by Water Services Board.

Success stories and best practice
- Process was community-driven from the outset
- Involvement of the local government and the Ministry of Water in the project design and implementation, including registration as a service provider with Water Services Board
- Establishment of a Water Committee, including water and sanitation education and administrative training
- Training of borehole operators to ensure continuous maintenance and swift repairs
- Integrated hygiene education element, including training of trainers.

Lessons learned
The number of beneficiaries was significantly overestimated due to miscommunication between the implementation partner and EABL, resulting in inaccurate documentation of beneficiaries. This may have been due to a typo.
1.2 Uganda

1.2.1 Rainwater Harvesting, Kapchorwa District, Uganda

The project financed the construction of 120 rainwater harvesting tanks in a rural community, without adequate water supply, benefiting 3,000 people. Due to an existing relationship with local farmers who produce barley for EABL and strong civil society in the project area, the level of community mobilisation was very high and led to a higher than expected financial contribution by the beneficiaries which allowed for the construction of 20 per cent more tanks. In addition, the project was combined with the implementation of sanitation criteria that increased the health impact in the community.

Project status at time of visit
85 per cent

Project partner and contact
Dr Kerstin Danert, Project Manager
kerstin@danert.com
ACCORD; Kaproron Community Based Health Care (KCBHC); Uganda Water and Sanitation NGO Network (UWASNET).

Project dates
Start: April 2006
Completion: Dec 2007

Number of beneficiaries
Validated: 3,000
Originally: 3,000
Percentage reached: 100 per cent

Method used to validate the number of beneficiaries
The base number was established using the following calculation:
120 tanks with one tank per household and an average of eight people per household (120 tanks/households x 8 people = 960 beneficiaries), plus three additional households on average per tank for most of the year except for three months dry season (120 tanks x 3 households x 8 people x 9/12 months = 2,180 beneficiaries.
The result of 3,140 beneficiaries was adjusted to 3,000 based on information from the community members, civil society and the local government.

Population in the area
160,600 (district, 2002 census)

Average household size in project area
8

Funding
Required: £49,000
Source: In market (£10,000) (Ugandan Breweries Limited) and Diageo Foundation (£39,000)
Cost per person: £16.33

Technology
Rainwater harvesting tanks, roofing and gutters.

Most common water sources in the area
Rivers
Used in conjunction with the project? Yes - river water used during the dry season when rainwater is limited to supplement water needs. It is used throughout the year by households which do not own a tank but are also benefiting from the project as the tank owners share their tank as long as there is more water available than they need.

Water quality of project
The water is not as safe in the dry season when no fresh water is added to the tank on a regular basis. Therefore the community is educated on the importance of boiling water, in the context of water safety and potential health impact. The project should also ensure that all community members are aware and are able to access, purification chemicals such as Water Guard which are generally available in the project area at affordable prices.

Current capacity
120 rainwater harvesting tanks of various sizes (4m³, 7.5m³ and 10m³).

Current use
Same as capacity

Available documentation
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results
Structure of visit
- Introduction at office of Commercial Farmers Association;
- Drive to village with Project Coordinator, Yeko Cherkut, Ministry of Health and Dr Tewestin, Rural Water Consultant
- Visit three tanks (two completed and one under construction)
- Conducted several interviews with beneficiaries and other community members;
- Transect walk including extensive discussions with water expert and community representatives during travel to and from village.

Project setup
120 concrete tanks of various sizes across the community were constructed by locally trained artisans and water is then fed into tanks by gutters from one side of the household’s tin roof.
Households have to qualify for co-funding by meeting five sanitation criteria: the household needs to have (1) a latrine, (2) a rubbish bin, (3) a bath shelter, (4) a drying rack for utensils and (5) show general domestic cleanliness.
Households also need to raise significant financial contribution: USh 440,000 (about £125) for 10m³ tank, USh 180,000 (about £50) for 7.5m³ tank. No contribution is needed for 4m³ tank.

Levy collection and use
Not applicable as rainwater tanks are owned by each household.

Water committee
No water committee due to the nature of the project but strong civil society element and management of implementation by community-based organisations.

Capacity for maintenance and repairs
Local artisan trained.

Official handover
Individual handover as each tank gets completed.

Creation of economic opportunities
Subsistence farming supported by rainwater harvesting tanks.

Health impact
Significant decrease in water-borne diseases due to higher water quality of rainwater compared with river water.

Sustainability and community ownership
Aggregate score: 34
Overall rating: High

Water policy integration and involvement of governmental organisations
Project implemented in very close cooperation with local government and Ministry of Health.

Success stories and best practice
- Local artisans trained for construction of tanks
- Significant financial contribution from benefiting households compared to their income levels
- Working with a community with strong community structures allowed a significant financial contribution of the community which resulted in the construction of 20 additional tanks (a 20 per cent increase) as well as the application of essential sanitation criteria that increased the impact on the general health situation of the community members
- The community included farmers that grow barley for EABL, a connection which improved EABL’s relationship with its suppliers
- Sanitation requirements form part of the selection process.

Lessons learned
- While the project has a great level of sustainability, community involvement and policy integration, it included a relatively high cost per person and a relatively small number of beneficiaries for the overall project
- The water is not as safe in the dry season when no fresh water is added to the tank on a regular basis. Therefore the community is educated on the importance of boiling water, in the context of water safety and potential health impact. The project should also ensure that the all community members are aware and are able to access, purification chemicals such as Water Guard which are generally available in the project area at affordable prices.
The project provides water to a small community in Northern Uganda through a borehole fitted with a hand pump. The project is closely linked with an innovative fish-farming project that aims to achieve large-scale commercial fish farming. Driven and managed by a very active local NGO, the project has been implemented with great success and will serve as a tool for additional water and sanitation sensitisation of the community members. The small size of the community and the entrenchment of the NGO which solely works in this community create a high level of community ownership while also ensuring a high level of sustainability.

**1.2.2 Borehole Ekintangala Fish Farm, Uganda**

- **Project status at time of visit**
  - Completed
- **Project partner and contact**
  - Habitat for Humanity
- **Project dates**
  - Start: Pre 2007
  - Completion: Dec 2007
- **Number of beneficiaries**
  - Validated: 800
  - Originally: 800
  - Percentage reached: 100 per cent
- **Method used to validate the number of beneficiaries**
  - Information provided by Habitat for Humanity, members of the community and verification through a transect walk.
- **Population in the area**
  - 800 (project community only)
- **Average household size in project area**
  - 10
- **Funding**
  - **Required:** £6,600
  - **Source:** In market (EABL Foundation and Uganda Breweries Limited)
  - **Cost per person:** £8.25
- **Technology**
  - New borehole with hand pump.
- **Most common water sources in the area**
  - Natural dams, swamp area, fish ponds (using water from a separate borehole).
  - **Used in conjunction with the project?** No
- **Water quality of project**
  - Good quality, tested by Afrimax.
- **Current capacity**
  - n/a (hand pump technology cannot fully exploit the borehole capacity).
- **Current use**
  - Approx. 6m³/day
- **Available documentation**
  - Project proposal
  - Progress reports
  - Final report
  - Technical specifications
  - Geological survey
  - Map of project area
  - Baseline study
  - Population census
  - Water test results
Structure of visit
- Visit of fish farm
- Visit of borehole
- Transect walk through community
- Interview with three households and a two-hour discussion with project manager from local NGO

Project setup
The project provides water to a small community in the north of Uganda through a borehole fitted with a hand pump. The project is closely linked with an innovative fish-farming project that aims to achieve large-scale commercial fish farming. Driven and managed by a very active local NGO.

Levy collection and use
No levy collection.

Water committee
No, project managed by local NGO.

Capacity for maintenance and repairs
NGO maintains project.

Official handover
Not yet taken place but desired by community.

Creation of economic opportunities
Yes, water is also used for irrigation of small-scale farming activities and fish farming.

Health impact
Provision of water is combined with water and sanitation education for the community. Nutrition has improved due to the increased food security from subsistence farming, assisted with improved irrigation.

Sustainability and community ownership
Aggregate score: 34
Overall rating: High

Water policy integration and involvement of governmental organisations
No direct links with national water policy.

Success stories and best practice
- Collaboration with an innovative NGO that fosters entrepreneurship.

Lessons learned
- Project is relatively small and was implemented without any major problems.
The project provided water tanks for 120 households in Kabale district, an area with very high rainfall of up to 1 metre per year. To facilitate the project, Uganda Breweries Limited (UBL) worked with Two Wings Agro forestry Network (TWAN) Women’s Group. Each benefiting household received a 4m³ water tank, guttering and pipes. Training was also provided for women’s groups in the area to construct the tanks and to train them in the use and maintenance of the rainwater tanks.

The involvement of a community-based organisation allowed for a high level of training and community involvement. A financial contribution by each household created elements for a high level of sustainability in the project.

**Project status at time of visit**
Complete

**Project partner and contact**
Dr Kerstin Danert, Project Manager
kerstin@danert.com
Mary Kamari
Two Wings Agro forestry Network (TWAN) Women’s Group/Kacyiro Health Centre
Mobile: +250 8300604

**Project dates**
Start: October 2004
Completion: End 2005

**Number of beneficiaries**
Validated: 3,000
Initially: 3,000
Percentage reached: 100 per cent

**Method used to validate the number of beneficiaries**
The base number was established using the following calculation:

120 tanks with one tank per household and an average of eight people per household (120 tanks/ households x 8 people = 960 beneficiaries), plus three additional households on average per tank for most of the year except for three months dry season (120 tanks x 3 households x 8 people x 9/12 months = 2180 beneficiaries (3x120x8).

The result of 3,140 beneficiaries was adjusted to 3,000 based on information from community members, civil society and the local government.

**Population in the area**
Official census not available.

**Average household size in project area**
8

**Funding**
Required: £10,626 (USh 100m)
*Source:* In market (Uganda Breweries Limited)
Cost per person: £3.54

**Technology**
Rainwater harvesting tanks with roofing and gutter.

**Most common water sources in the area**
River in valley.
*Used in conjunction with the project:* Rarely

**Water quality of project**
The water is not as safe in the dry season when no fresh water is added to the tank on a regular basis. Therefore the community is educated on the importance of boiling water in the context of water safety and potential health impact. The project should also ensure that all community members are aware and are able to access purification chemicals such as Water Guard which are generally available in the project area at affordable prices.

**Current capacity**
120 rainwater harvesting tanks with 4m³, capacity each.

**Current use**
Same as capacity

**Available documentation**
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results
Project history
To facilitate the project, UBL worked with Two Wings Agro forestry Network (TWAN) Women’s Group. TWAN is a network of grassroots organisations that formed together to consolidate resources and skills to help eradicate poverty. Many of the groups under TWAN have been in existence since the early 1980’s. TWAN projects have included providing revolving credit, improving livestock productivity and promoting organic agriculture. Supporting TWAN on the rainwater harvesting project was Dr. Kerstin Danert, a community water supply specialist based in Uganda. Uganda Breweries launched the ‘Household Rainwater Harvesting’ project with TWAN in October 2004. Over a 12-month period, 120 homes in the area were provided with household rainwater harvesting facilities – a 4m³ water tank, guttering and pipes. Training was provided for women’s groups in the area to construct the tanks and to train them in the use and maintenance of the rainwater tanks.

Structure of visit
• Visit of four households with tanks
• Conducted 10 interviews with beneficiaries and other community members
• Performed two transect walks and extensive discussions, including a two-hour discussion with Mary Kamari from TWAN.

Project setup
Rainwater harvesting tanks with the capacity of 4m³ for 120 households across the community. Concrete tanks were constructed by the household with support by the TWAN. Water is then fed into tanks by gutters from one side of the household’s tin roof.

Levy collection and use
Not applicable as rainwater tanks are owned by each household.

Water committee
No water committee due to the nature of the project but strong civil society element and management of implementation by community-based organisations.

Capacity for maintenance and repairs
Training provided for women’s groups in the area to construct the tanks and to train them in the use and maintenance of the rainwater tanks.

Official handover
As each tank is built.

Creation of economic opportunities
Subsistence farming and livestock supported by rainwater harvesting tanks.

Health impact
Significant decrease in water-borne diseases due to higher water quality of rainwater compared with river water. However, the rainwater is still not considered 100 per cent safe, particularly in the dry season when there is no regular fresh water that goes into the tank. Boiling of rainwater is considered best practice.

Sustainability and community ownership
Aggregate score: 34
Overall rating: High

Water policy integration and involvement of governmental organisations
Rainwater harvesting is one of the priority areas of the Ministry of Health, the minister has endorsed the project directly.

Success stories and best practice
• Training provided for women’s groups in the area to construct the tanks and to train them in use and maintenance
• Significant financial contribution from benefiting households.

Lessons learned
• While the project has a high level of sustainability, community involvement and policy integration, it included a relatively high cost per person with a relatively small number of beneficiaries overall.
• The water is not as safe in the dry season when no fresh water is added to the tank on a regular basis. Therefore the community is educated on the importance of boiling water, in the context of water safety and potential health impact. The project should also ensure that the all community members are aware and are able to access, purification chemicals such as Water Guard which are generally available in the project area at affordable prices.
Already in its second phase after the successful completion of the first phase in March 2006, this project will provide drinking water and improved sanitation to more than 15,000 people in disadvantaged peri-urban areas of Ouagadougou, the capital of Burkina Faso. The project partner works in close collaboration with the local government and employs borehole technology to connect the poor to the water mains and to provide them with adequate and affordable access to water. The project also includes an extensive sanitation and hygiene component.

### Project status at time of visit
53 per cent
Status is based on total project – the total impact will be at least 15,000 beneficiaries when completed on 30 August 2008.

### Project partner and contact
Yéréfolo Mallé, Country Representative
WaterAid Burkina Faso, Ouagadougou
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yerefolomallei@wateraid.org

### Project dates
Start: August 2006
Completion: August 2008

### Number of beneficiaries
Validated: 8,000
Originally: 8,000 (as at December 2007, 15,000 in total)
Percentage reached: 100 per cent

### Method used to validate the number of beneficiaries
Information received from local government, project partner and observations. WaterAid supplies a borehole for an average of 600 people, a standpipe for an average of 300 people and uses an average of 10-15 litres per person per day within 300m as a standard for improved access to safe drinking water.

The actual number of beneficiaries is likely to be higher by about 25 per cent. The exact number of households and people benefiting from the project will be confirmed by a more detailed baseline study using community volunteers which visit each household 3-4 times for hygiene and sanitation sensitisation over the whole project period.

### Population in the area
403,661

### Average household size in project area
8

### Funding
**Required:** £100,000
**Source:** In market – Venture Africa (£50,000 over two years)
**Cost per person:** £6.25, for the first year.

### Technology
Rehabilitation of 16 boreholes with hand pumps and construction of 16 new water standpipes in the peri-urban area of the district and designated unplanned neighbourhoods.

### Most common water sources in the area
Standpipes and boreholes.

### Water quality of project
The water quality is constantly monitored through testing up to three times per month by the NGO.

### Current capacity
n/a

### Current use
n/a

### Available documentation
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results
Project history
The project is already in phase two which began in October 2006 after the successful completion of phase one in May 2006. The project was implemented in close collaboration with the local government which included a preliminary baseline study. The selection of sites was based on an assessment of areas with the greatest need and highest poverty levels.

Structure of visit
- Meeting with WaterAid country representative
- Meeting with mayor of suburb and government representative, including extensive presentation by programme manager as well as open discussion of any challenges
- Visit of local school including sanitation facilities and presentation of hygiene education programme
- Visit of water fetching point in sector 28 (Goundrin) and interview with community member (Ms Niodogo Tuussaint)
- Visit of borehole with hand pump in sector 20 (Yamtemga) and interview with community member (Mr Laurent Kologo)
- Visit of future fetching point site in local market area
- Visit of latrine for local household and interview with household member
- De-brief with WaterAid country representative.

Project setup
The project covers five sectors and two villages under the administration of the Bogodogo municipality.

To date, the project included the rehabilitation of nine boreholes and the construction of eight community-fetching points. It covered administrative sectors with existing water coverage between 25-71 per cent, which was increased by one to six per cent.

In addition, the project improved sanitation for selected communities by constructing 50 family latrines and eight latrines for one school.

Levy collection and use
XOF 60 (£0.07)/210l tank, XOF 10 (£0.01)/20l
The collected funds are used for maintenance and repairs but also for the extension of the project which has already been achieved at one site.

Water committee
Yes. Community members were trained and water and sanitation committees were formed in close collaboration with the communities and the local government. In addition, community volunteers were trained about hygiene education to teach each household in the selected communities.

Capacity for maintenance and repairs
Yes. Local government technicians and community members received technical training.

Official handover
No official handover yet as project is still in progress. The Marketing Director from Venture Africa has however paid an official visit.

Creation of economic opportunities
No direct creation of economic opportunities but the cost to access water has been significantly reduced.

Health impact
Significant improvement in hygiene within schools has led to better student health. They also share their learnings at home.

Sustainability and community ownership
Aggregate score: 38
Overall rating: High
Water policy integration and involvement of governmental organisations
The project has financed a new position for a water and sanitation expert within the local government who is also the project manager. The project design and implementation is therefore not only fully integrated into government policy and targets but has greatly enhanced the capacity of the local government. Without project funding, the local government would not have been able to carry out these activities. Local government authorities also helped in the site selection process.

Success stories and best practice
- The number of beneficiaries was established by community volunteers who provide hygiene and sanitation education and visit each household three to four times. WaterAid emphasised that using standards to establish the number of beneficiaries is problematic and recommends an empirical approach
- Very close collaboration with local government, including capacity building within the government, which has led to a very high level of community involvement. The partnership was described as ‘symbiotic’ by the NGO
- Project sites were selected based on need for water and poverty level in close collaboration with the local government
- Highly integrated sanitation component, including construction of latrines, hygiene education programme in schools and sensitisation of community members through community members who visited each household three to four times
- The levy collection from the project has already resulted in the construction of one additional fetching point and further extensions of the project through this funding mechanism are planned
- The project partners provided exemplary project documentation and extensive data, using a baseline study and comprehensive monitoring and evaluation
- The project design has been developed as a pilot to allow replication across the continent in order to contribute to the achievement of the MDGs in water and sanitation.

Lessons learned
- While the sanitation and hygiene component of the project is important for the overall success of the project, such activities are not part of the core goal of Water of Life (improved access to water) and such activities should ideally be funded by an additional partner.
The Kechene water and sanitation project covers four Kebeles (administrative areas) in the peri-urban slums of Kechene, Addis Ababa. AMREF is already running several project activities in HIV/AIDS prevention, and care and support focused on women and orphans, including opening a clinic in the district. The project provides access to safe drinking water by connecting to the municipal water mains, and constructing hygiene and sanitation facilities that will reach 25,000 direct and 20,000 indirect beneficiaries by September 2009.

The project included extensive stakeholder consultations including the site selection by a committee comprised of seven representatives from all project areas to identify the areas most in need of the water and sanitation facilities.

**Project status at time of visit**
24 per cent (6 out of 25 sites to be completed by 31 December 2007).

**Project partner and contact**
AMREF
Luisa Hanna, Programmes Manager
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+44 (0)20 7269 5529

Gadisa Hailu, Project Officer
AMREF Ethiopia
gailuhailu@yahoo.com

**Project dates**
Start: June 2007
Completion: September 2009

**Number of beneficiaries**
Validated: 6,000
Originally: 10,000 (25,000 by completion, September 2009)
Percentage reached: 60 per cent

**Method used to validate the number of beneficiaries**
Established direct beneficiaries and household by visiting three out of six project sites completed by 31 December 2007. Obtained project documentation and calculations from the partner, which was derived from close collaboration with the local government, and numbers of benefiting households and average household size. Each installation benefits 1,000 people or 142 households on average.

**Population in the area**
43,623 (9,089 households)

**Average household size in project area**
7

**Funding**
**Required:** £150,000 (total project cost)
**Source:** (£100,000 for two years by Venture Africa) Diageo Foundation (£50,000)
**Cost per person:** £6.00 (based on number of 25,000 beneficiaries stated in the original proposal)

**Technology**
Piped connections to water mains and hygiene and sanitation facilities.

**Most common water sources in the area**
Open wells, rivers and natural springs.
**Used in conjunction with the project?** Yes

**Water quality of project**
Water is from the municipality, sourced from a local dam.

**Current capacity**
n/a

**Current use**
n/a

**Available documentation**
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results

**Project history**
AMREF has been working in Kechene slum district since 2002, adopting an integrated approach to poverty reduction. AMREF is currently working with an estimated 35,000 people in Kechene to develop their livelihoods, mitigate the impact of HIV/AIDS and to support vulnerable children. However, the district suffers from limited access to clean water. Integrating a water element is an essential component to the poverty reduction and health amelioration process in Kechene slum, and one that is high on the agenda of the Government of Ethiopia.
The proposed project will increase sustainable access to clean water for residents in Kechene slum. Young children and women, being among the most vulnerable members of the community, will be the primary targets for the interventions.

The following activities will be undertaken to achieve the project goals:

- Baseline assessment (including hydro-geological survey) to refine need (to be conducted 15-25 November 2007)
- Mobilisation and sensitisation of water and sanitation issues to target communities
- Capacity building of community to establish water management committees
- Training of 25 local people in the management of water sources
- Construction of 25 water/shower kiosks, serving 1,000 people each
- Work with communities to develop information materials to increase awareness of water-related diseases
- Training of community members to act as community water educators
- Organisation of monthly and bi-annual review meetings to assess progress at community level
- Documentation and dissemination of experiences, lessons learned and best practices
- Conduct the mid-term evaluation
- Organise the final evaluation.

**Structure of visit**

- Briefing on project activities, technical report and office visits at AMREF Kechene District office and health clinic
- Visit of WatSan project site, Eigzeber Abe (AWSSP-5) and interview with community members
- Visit of WatSan project site, Mengeshe Site (AWSSP-3) and interview with community members
- Visit of WatSan project site, Bitcha Gibi (AWSSP-1) and interview with community members
- Meeting with WatSan Committee and Discussion at Bitcha Gibi
- Visit of current water source used by community
- De-brief with project officers.

**Project setup**
The project will construct 25 water and sanitation facilities within three years. Each facility consists of two taps for water fetching, four showers, four pit latrines, two hand washing facilities and one tap and washing basin for laundry.

**Levy collection and use**
A levy will be collected to pay for the metered water coming from the municipality. In addition, three or four households will own one shower and one latrine, which they can rent for a small fee to others in the community.

**Water committee**
Yes. Water and sanitation committees were formed at all project areas including a democratically elected chairperson. Each committee suggested three potential project sites and was involved in the final selection and implementation. The committees also served as an empowerment tool for women as they constitute the majority of the committee. A Kechene district local authority water and sanitation committee was also established with the assistance of the local government.

**Capacity for maintenance and repairs**
Each site has its own technical manager, usually a committee member trained for this purpose.

**Official handover**
Project will be completed in 2009.

**Creation of economic opportunities**
No direct economic benefits for the beneficiaries recorded to date due to early project stage.

**Health impact**
The project will have a significant health impact as it will reduce the prevalence of ‘flying toilets’, prevent infectious disease through the access of adequate hygiene and sanitation facilities as well as the general hygiene education and the introduction of hand washing practices.

**Sustainability and community ownership**

- **Aggregate score:** 38
- **Overall rating:** High

**Water policy integration and involvement of governmental organisations**
The project was implemented in close cooperation with the relevant government authorities, including the provision of land through 99 year leases and consultation of the Gullele sub-city Basic Development and Construction Department for the final design of the facilities.

**Success stories and best practice**

- The project design and site selection was established through extensive consultation with the local community and government, creating a high level of community ownership at an early stage.
- The projects have a good exit strategy as it builds community capacity to act upon their need for water and incorporate income-generating activities. This encourages and empowers the communities to maintain facilities after funding terminates.
- The project provides particular benefit for the most vulnerable groups, women and children, who spend up to six hours fetching 20 litres of water in the dry season (from November to March). Women were at risk of attack when coming back from the fetching points after dark, which they can now avoid due to the improved access.

**Lessons learned**

- The baseline study should be the first step before project implementation as the total number of beneficiaries is important in the project selection.
- The community members did not seem to be aware about the donor and its intention, which could be rectified if the project partner communicates its donor relations and Water of Life plaques are installed at completed facilities.
This three year project aims to provide improved access to safe drinking water for 124,595 people in 77 villages and adequate sanitation for 103,026 people in Mkuranga district, one of the poorest districts in Tanzania. Specifically, the project aims to increase the percentage of Mkuranga communities living within a 400m radius of a safe water supply from 26 per cent to 85 per cent by September 2009; to increase the access to hygienic sanitation facilities in 11 wards from 40 per cent to 85 per cent and to reduce water-borne diseases such as cholera and diarrhoea by 30 per cent among children under five by February 2010.

The project includes a very high level of community involvement and capacity building for the local government. Both target groups have been involved from the planning phase and are trained and educated to successfully manage and sustain their water and sanitation provision and resources by the end of the project.

**Project status at time of visit**
Installations completed by end of 2007:
- 10 out of 200 shallow hand dug wells
- 15 out of 55 deep boreholes
- 10 out of 97 rainwater jars of 2.2m³ each

**Project partner and contact**
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**Project dates**
Start: March 2007
Completion: February 2010

**Number of beneficiaries**
Validated: 18,500
Originally: 20,000 (as at December 2007, 124,595 by completion in 2009)
Percentage reached: 93 per cent (of Dec 2007 target)

**Method used to validate the number of beneficiaries**
While the project visits confirmed the general project progress, the number of people benefiting from 10 wells, 15 boreholes and 10 rainwater jars was not consistent enough to establish the exact number of beneficiaries. However, the target number of beneficiaries could be confirmed by using the general capacity of the employed technologies, 350 people per well, 1,000 per borehole and 10 or two households per rainwater jar.

**Population in the area**
202,429 (across 101 villages and 15 wards).

**Average household size in project area**
5

**Funding**
Required: £150,000 to leverage European Union funding for total project that will impact 250,000 people
Source: In market – Venture Africa and employee giving
Cost per person: £1.34, based on target number

**Technology**
Protected shallow wells and deep boreholes with hand pumps as well as rainwater harvesting tanks.
Most common water sources in the area
Unprotected hand-dug shallow wells, used by the majority of the population (72.8 per cent) during the dry season; protected shallow wells equipped with hand pumps, boreholes equipped with hand pumps, natural streams and ponds, rainwater harvesting systems and piped borehole water supply systems.

Used in conjunction with the project? Yes. However, the project aims to improve all water sources to provide access to safe water for 85 per cent of the population in the district.

Water quality of project
Water quality was tested

Current capacity
n/a at time of visit

Current use
n/a at time of visit

Available documentation
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results
- Mkuranga water sanitation and hygiene project
- AMREF water and sanitation umbrella programme (WASUP) Tanzania project proposal:

Project history
AMREF Tanzania is responsible for managing the project in Mkuranga. AMREF has worked in Mkuranga since 2000 and will leverage existing relationships with local authorities and communities to ensure smooth running of activities.

AMREF UK oversees project implementation included monitoring and evaluation, and ensuring that activities proceed as planned. AMREF UK is responsible for financial and narrative reporting and provides Diageo with regular updates on project progress.

Structure of visits
First visit March 2007:
- Visit to local hospital and school without adequate access to water, including interviews with community representatives and encounter with school class
- Visit to borehole with dysfunctional diesel-powered pump that used to serve the hospital and surrounding communities
- Visit to one completed borehole, three shallow wells and one unproctected traditional well, including interview with water committee and community members
- Debrief with project officer at AMREF office
- Second visit October 2007:
  - Extensive discussions and progress updates during travel to Mkuranga from Dar es Salaam with Christian Chonya, Project Manager
  - Visit to ongoing training of Community’s Own Resource Persons
  - Visit to drilled borehole in Kalole, Marunja sub-village, to be completed by December 2007, including interview with water committee members (Mr Adam Maulid and Mr Thabit Shaaba Sege, chairman of Kalole water committee) and mother of three (Ms Leila Sultan)
  - Visit to protected well with hand pump and interview with girls and water vendor
  - Debrief with project manager during return journey.

Project setup and status
The project includes the construction of 200 protected shallow wells and 55 deep boreholes, both equipped with hand pumps as well as the installation of 97 rainwater harvesting tanks with the capacity of 2.2m³ across 11 wards of the district until February 2010.

Until December 2007, the following installations to provide improved access to safe water have been achieved:
- 10 out of 200 shallow hand dug wells constructed
- 15 out of 55 deep boreholes constructed
- 10 out of 97 rainwater jars of 2,200 litres each built.

In addition, the following water and sanitation activities have already been carried out until December 2007:
- 120 out of 385 local artisans trained in water point and sanitation facilities construction
- 0 out of 97 demonstration VIP and ECOSAN latrines at public facilities constructed (schools and dispensaries)
- 0 out of 2,500 household latrines constructed
- 377 out of 770 Community’s Own Resource Persons (CORPs) trained to provide hygiene and sanitation education to households
- 76 out of 77 trainers trained to promote hygiene and sanitation to households through Participatory Hygiene and Sanitation Transformation (PHAST) approaches
- 0 out of 1,540 water/health village days (for the promotion of appropriate water, hygiene and sanitation practices) conducted
- 0 out of 77 community culture groups trained in community mobilisation and promotion of hygiene practices
- 0 out of 20 WATSAN inter-Village Competitions conducted
- 7 out of 7 sets of IEC materials developed for public campaigns
- 0 out of 255 water user groups trained to manage their water points
- 29 out of 77 water committees trained in water management
- 29 out of 77 health committee trained in health education and management of sanitation facilities
- 11 out of 11 Ward Development Committees trained in monitoring and supervision of activities in their respective wards
- 29 out of 77 village councils/governments trained in the management and sustainability methodologies of the project
- 17 out of 25 District Steering Committee members trained on support, monitoring, facilitation and management for the post-project phase.
Levy collection and use
The project includes the setting up of water committees in all target communities. This includes the establishment of water funds and bank accounts to operate and maintain water supplies. The levy will be set by the community according to the needs for maintenance and income levels.

According to the baseline study, most of the households are willing to contribute towards capital investment costs (in cash and kind) and expressed willingness to pay for water collected from installed water facilities.

About 12 per cent of the households already paid for water services (TSh30/£0.01 per 20 litre bucket at source or TSh150/£0.07 when delivered to households by push cart vendors).

Water committee
Project villages without water committees will be assisted in establishing water committees, water funds and bank account as a requirement to qualify for project receipt and funding.

The baseline study also suggests that consideration should be given to formation of Water User Associations and their legal registration to ensure that beneficiary communities become the legal owners of their water supply schemes including protected shallow wells and boreholes.

Capacity for maintenance and repairs
The project includes the training of 385 local artisans in water point and sanitation facility construction. It includes community involvement in project design, implementation and management as well as emphasis on applying technology that is appropriate to the level of development for the target population. The use of local resources and skills training, as well as the establishment of functioning community structures will ensure that skills are developed to manage the project.

Official handover
Project will be completed in 2010.

An official ceremony was held by AMREF Tanzania to launch the Water and Sanitation Umbrella Programme in Mkuranga District in March 2007. The ceremony was attended by the district government, the European Union, and AMREF’s Country Director in Tanzania. The launch of the project was officially announced followed by the signing of the Memorandum of Understanding (MoU) between AMREF and District. The MoU details and agrees roles and responsibilities for each partner.

Creation of economic opportunities
Increased productivity of the community through the time saved especially for women in having access to clean water.

Household health has improved due to savings accrued from not having to treat water related and water borne illnesses. Sanitation and hygiene income-generating activities.

Health impact
Project aims to reduce water-borne diseases such as cholera and diarrhoea by 30 per cent among children under five by February 2010.

Sustainability and community ownership
Aggregate score: 40
Overall rating: High

Water policy integration and involvement of governmental organisations
AMREF is working closely with local government to design, implement and manage existing and new community water sources and environmental sanitation. For this purpose, AMREF also provided training to local government officials.

The hope is that by-laws will be introduced to formalise these water user associations/groups and their role in maintaining and managing water facilities. These would outline the rights and duties of water user groups, duties and obligations of village councils; ward development councils; sanitation and protection of water sources; inspection of sources and water facilities; theft, damage of water equipment and penalty etc.
Success stories and best practice

- The project aims to improve hygiene and sanitation practices among benefiting communities through the use of participatory hygiene and sanitation transformation approaches.
- Community involvement in project design, implementation and management as well as emphasis on applying the technology that is appropriate to the level of development.
- The community-based information system developed for local consumption will give familiar data for local planning and decision-making. Water and sanitation reporting will become a regular item on agendas for all wards and village development committee meetings.
- The baseline study highlights that to ensure community ownership and management of installed water facilities under the present project is achieved, it is important for the district council, AMREF project staff and the beneficiaries to work together in a participatory manner to define, understand, assume and undertake their specific roles and responsibilities that they must perform in order to ensure the success of the proposed project within the planned time frame. The communities are empowered to manage the project activities on their own after project completion and handover.
- The community structures established during the project period will continue to receive technical and financial (where necessary) assistance from local authorities at the ward and district levels thereby enabling them to continue to oversee the maintenance of water systems. The structures include village councils, village water committees, and water point user groups.
- The training of community health workers (CHW) on facilitation skills and participatory hygiene and sanitation transformation (PHAST) provides the community with the capacity to conduct house-to-house training, and education on hygiene and sanitation best practices. The CHW system used by AMREF has demonstrated the possibility to bridge the gap between communities and the health system in Tanzania. The CHW system is bringing health messages directly to individual households, and encouraging attendance at health centres, community participation in health activities and keeping the health facilities informed about the local population through ongoing monitoring and reporting.
- Comprehensive target setting, monitoring and reporting by implementation partner.

Lessons learned

- The project has faced some difficulties in stimulating community demands for the proposed sanitation improvements. Many prefer existing traditional latrines. However, the social marketing approach will be adopted to promote latrine technology.
- Some of the villages, particularly those in more remote areas of Mkuranga, have less community participation in the construction of shallow wells. AMREF will work with these communities, through community health workers, and village water and health committees to encourage the increased involvement of communities.
- While all 77 villages have set up bank accounts for the funds, contributions are slow to be made. Further community sensitisation and training of community health workers in each village and committees should ensure contributions will be made.
- Communities have lower literacy rates than expected, prompting a change in teaching methodology, for example using pictures instead of words on flip charts.
1.3.4 Water Filter Project, Ghana – Venture Africa

The water filter project creates a social enterprise system that produces, distributes and promotes filters for household water use in Ghana. It is designed to disseminate a locally produced water filter for the provision of safe drinking water in areas where high quality piped or well water is not available. The objective of the project is to develop the market for the locally made filter in selected communities using a social marketing campaign strategy to improve public health and establish a profitable and sustainable supply chain - creating local jobs and income.

The project was co-funded by a donation from Brian Voakes a partner of Venture Africa. The project distributed 1,000 free filters to schools benefiting 15,000 pupils in the Ashanti and Volta Regions. It is part of a larger water filter project which received core funding from Diageo Foundation. See Appendix 1.6.1 for more details.

The project is fundamentally different from all other water projects as it does not directly provide access to an improved water source but it does ensure the safety of drinking water and therefore provides improved access to 'safe' drinking water. The approach of EnterpriseWorks, the project partner is to foster entrepreneurial structures that will ultimately be self-sustaining. As opposed to all other Water of Life projects which are based on the creation of a physical asset for the longer term, this project is based on the introduction of a technology and distribution structure. The filters will have to be replaced after three years while the containers used in conjunction with the filter can be used for a longer period.

Project status at time of visit
Complete

Project partner and contact
Atsu Titiati, Project Manager
EnterpriseWorks
atsu@africaonline.com.gh
Mobile: +233244759435

Project dates
Start: May 2007
Completion: Dec 2007

Number of beneficiaries
Validated: 15,000
Originally: 5,000
Percentage reached: 300 per cent

Method used to validate the number of beneficiaries
The number of beneficiaries was established using the number of distributed filters and the average number of beneficiaries according to the distribution method. For the project element funded by Brian Voakes, 1,000 filters were distributed solely to schools, benefiting an average of 15 pupils per filter (see Appendix 3.3.2 for details).

Population in the area
Ashanti Region: 3.6m
Volta Region: 1.6m

Average household size in project area
Not applicable - the target audience were schools.

Funding
Required: £7,500
Source: Donation from Brian Voakes.
For more information on this project see Appendix 1.6.1.
Cost per person: £0.50
1.4 Cameroon

1.4.1 Water Conservation Project, Soulede Village, Mokolo, Soulédé District, Far North Province, Cameroon

The project financed the construction of eight dams on the village river in northern Cameroon. Precipitation falls for about three months per year. The traditional method in the region to obtain water year-round is the construction of dams to slow down the flow of rivers. This increases the penetration of the water into the ground, thereby raising groundwater levels.

The procedure results in an increased availability of water for irrigation and livestock from the dams as well as higher availability of groundwater for open wells throughout the year. The project uses a new construction method which will ensure a much higher lifetime of the dams than the many washed-out dams in the area.

The project was selected based on an application from the community to the Guinness Community Fund in 2005. While Guinness Cameroun S.A. financed construction materials, the community contributed 10 per cent of the cost as well as technical expertise and manual labour.

The project will lead to significant livelihood improvements for 25,000 beneficiaries through improved access to water for irrigation purposes and livestock after the first rains in April/June 2008. Full access to drinking water will occur in five years time.

Project status at time of visit
75 per cent complete

Project partner and contact
Centre Régional pour le Développement Durable Endogène et Communautaire (CRADEC)
Jean Mballa, Directeur National
mballamba2001@yahoo.fr
+237 776 8548, Yaoundé
www.foscam.org
Jean Xilbat, Secrétaire General du Comité de Développement de Soulédé (CDS)
Mobile: +237 9626622/9162058

Project dates
Start: November 2006
Completion: December 2007

Number of beneficiaries
Validated: 25,000
Originally: 50,000
Percentage reached: 50 per cent

Method used to validate the number of beneficiaries
Population census from Ministry of Health (2007) for six villages within catchment areas of 5km radius from project.

Population in the area
24,926

Average household size in project area
10

Funding
Required: £12,000
Source: Guinness Cameroun S.A.
Cost per Person: £0.48

Technology
Earth and stone dams in riverbed to increase groundwater level.

Most common water sources in the area
Open wells
Used in conjunction with the project? Yes

Water quality of project
Not applicable – full access to drinking water will occur at a later stage.

Current capacity
Not applicable

Current use
Not applicable

Available documentation
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results
Project history
Soulédé is in the far north of Cameroon, where acute drought affects the region during the dry season with virtually no water to grow crops and no water for drinking, thereby resulting in serious famine, starvation and deaths of both humans and animals.

The project has been selected based on an application from the community to the Guinness Community Fund in 2005. After CRADEC carried out feasibility studies, this project was finally selected and implemented within the communities most in need. Project implementation was initially delayed, but a new project management team has insured completion by December 2007.

Structure of visit
- Visit and inspection of six dams both completed and ongoing
- Explanation of innovative construction method by local project engineer
- Interview with community members at open wells in dried out river bed
- Transect walk through community
- Interview session with water committee
- Interview with project partner.

Project setup
Eight dams were constructed every one km on the main river close to the community. The dams are between 0.3-1m high, varying according to the height of the river. The construction of the dams is based on an innovative method that identifies sites where the foundations of the dams can be laid on solid ground, using large stones in the riverbeds as foundation to avoid future erosion of the dams. The dams are 0.5m and enforced by three steps downstream of the dam, using a combination of granite stone and cement to ensure the right level of resistance and permeability.

Water in the catchment area will provide direct access to water for irrigation, livestock and drinking water during the rainy season. In addition, the dams will increase the penetration of water into the ground, thereby raising the groundwater level. This results in a higher availability of groundwater for open wells throughout the year, though this level of groundwater increase will only reach a certain level for drinking after five years from project completion. The wells will be constructed by the community after the project is completed.

Levy collection and use
Not applicable.

Water Committee
Yes – a local development committee with 23 members, including seven women and four out of 12 local chiefs. The committee has been the driver for the implementation of this project.

Capacity for maintenance and repairs
Yes - the project was designed by a local engineer, implemented by community members and constructed by local contractors.

Official handover
Planned for June 2008.

Creation of economic opportunities
The project provides water for the irrigation of cotton, millet and maize and also for the wellbeing of livestock.

Health impact
Health issues form an integral part of the NGO’s sensitisation programme with the community, especially on how to properly manage water to avoid contamination.

Sustainability and community ownership
Aggregate score: 36
Overall rating: High

Water policy integration and involvement of governmental organisations
Government representatives were involved in the selection process of dam sites and water user committees are in accordance with national policy guidelines.

Success stories and best practice
- The project was selected based on an application from the community to the Guinness Community Fund in 2005. The Fund received 800 applications from local communities in response to an extensive advertising campaign. 30 projects were short-listed with the assistance of CRADEC and the final selection of nine projects was made in an official gala event by a distinguished panel, consisting of representatives from government, development organisations, communities, media and the private sector.
- Guinness Cameroun S.A. financed the construction materials while the community contributed 10 per cent of the cost as well as providing technical expertise and manual labour. This ensured a high level of community involvement.

Lessons learned
- The project was selected based on broader community investment criteria of the Guinness Community Fund. As such, the main purpose is to provide more than just access to safe drinking water.
The project collects water from two natural sources in a valley close to the community. The water is collected in a treatment tank from which it flows into a reservoir. From the reservoir, the water is pumped for 2km to a 75m³ tank and distributed to 12 fetching points. All of the benefiting households are within 300m of a fetching point. Households can also pay for a direct connection if they are close enough to one of the pipes.

The project was selected in response to an application by the community to the Guinness Cameroun Community Fund in 2005 and includes a financial contribution of 10 per cent by the community as well as the provision of subsidised technical expertise and labour, all of which ensured a high level of community involvement and ownership.

Funding
Required: £17,000
Source: Guinness Cameroun S.A.
Cost per Person: £2.13

Technology
Gravitational-fed distribution system drawing water from natural springs.

Most common water sources in the area
Open wells, natural springs

Used in conjunction with the project? No – treated water from the distribution system will be the only source of water for the beneficiaries.

Water quality of project
Water is treated and regularly tested by government agency.

Current capacity
75m³ tank, pump capacity (m³/h).

Current use
The project facilities are not yet in use.

Available documentation
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results
Project History
The project has been selected based on an application from the community to the Guinness Community Fund in 2005.

Structure of Visit
- Visit and inspection of tank construction site
- Visit of water sources with treatment tank and water pumps
- Interviews with project engineer, water manager and local chief.

Project setup
The project collects water from two natural sources in a valley close to the community. The water is collected in a treatment tank from which it flows into a reservoir. From the reservoir, the water is pumped for 2km to a 75m³ tank and distributed to 12 fetching points. All of the benefiting households are within 300m of a fetching point. Households can also pay for a direct connection to their homes if they are close enough to one of the pipes.

Levy collection and use
Yes – CFA 1,000/household/month or CFA 5,000 for households with a direct connection.

Water committee
No

Capacity for maintenance and repairs
The community was assisted with project implementation by local expertise. Systems and human resources are in place for maintenance and repairs.

Official handover
Planned for 2008

Creation of economic opportunities
No direct creation of economic opportunities.

Health impact
Not applicable as project was not completed at time of visit.

Sustainability and community ownership
Aggregate Score: 35
Overall Rating: High

Water policy integration and involvement of governmental organisations
Government representatives were involved in the selection process.

Success stories and best practice
- The project was selected based on an application from the community to the Guinness Community Fund in 2005. The Fund received 800 applications from local communities in response to an extensive advertising campaign. 30 project were short-listed with the assistance of CRADEC and the final selection of nine projects was made in an official gala event by a distinguished panel, consisting of representatives from government, development organisations, communities, media and the private sector.
  - Guinness Cameroun S.A. financed construction materials while the community contributed 10 per cent of the project cost as well as the subsidisation of technical expertise and manual labour. This ensured a high level of community involvement.
  - The project was cost-effective as it rehabilitated an existing water system.

Lessons Learned
- The time taken to mobilise the community effectively delayed the project implementation and also reduced the number of beneficiaries by one third. It was reported that these community members invested in alternative means to get access to safe drinking water despite the higher cost.
1.5 Nigeria

1.5.1 Borehole Mbaise, Imo State

The project provides safe drinking water to 100,000 people. One borehole was dug, with a 63m³ elevated tank and nine fetching points within a 2km radius. The project was implemented by an engineering firm which ensured a very high quality of the installation but community involvement has so far been limited to a few elders and the local government. Additional activities to enhance the level of community involvement and capacity for maintenance are planned and should ensure the sustainability of the project.

Project status at time of visit
Completed

Project partner and contact
Finning Ltd (engineering firm)

Project dates
Start: January 2007
Completion: June 2007

Number of beneficiaries
Validated: 100,000
Originally: 100,000
Percentage reached: 100 per cent

Method used to validate the number of beneficiaries
Letter by local governor confirming the number of beneficiaries. The current water use is however slightly below the optimum of 10-15l/person/day, providing only an average of two litres/person/day (200m³ for 100,000 people) which could be increased if the full capacity of the boreholes were to be exploited by filling the tanks more than twice a day.

Population in the area
4,000,000 (Imo state)

Average household size in project area
10

Funding
Required: £40,000
Source: In market (Guinness Nigeria plc)
Cost per Person: £0.40

Technology
Boreholes with elevated tanks and multi-tap fetching points.

Most common water sources in the area
Traditional wells, small streams, commercial vendors, rainwater harvesting and underground tanks.

Used in conjunction with the project
Likely.

Water quality of project
Good, chlorine and PH-treated. Awaiting laboratory tests for PH-treated water.

Current capacity
2x 63m³ tanks and 18m³/h pump = max. 432m³/day

Current use
200m³ (tanks filled twice a day)

Available documentation
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results
- Government letter

The project provides safe drinking water to 100,000 people. One borehole was dug, with a 63m³ elevated tank and nine fetching points within a 2km radius. The project was implemented by an engineering firm which ensured a very high quality of the installation but community involvement has so far been limited to a few elders and the local government. Additional activities to enhance the level of community involvement and capacity for maintenance are planned and should ensure the sustainability of the project.
Structure of visit
- Visit to pump house and storage tanks
- Reception at His Royal Highness, Eze Uduhirinwa, who facilitated project implementation
- Visit to village centre and four fetching points, including two households and six sample interviews.

Project setup
150m deep borehole with two 9m-high elevated tanks provided by Aba Brewery. Five fetching points within a 2km radius, each with three to four taps.

Levy collection and use
No levy.

Water committee
No water committee. Elders were involved at certain stages of the project.

Capacity for maintenance and repairs
In planning.

Official handover
April 2008

Creation of economic opportunities
Water is essential for typical economic activities in the area, particularly palm oil production.

Health impact
No clear evidence available.

Sustainability and community ownership
Aggregate score: 24
Overall rating: Medium

Water policy integration and involvement of governmental organisations
High. The project was selected and approved by the Ministry of Public Utilities and Rural Development, Government of Imo State of Nigeria.

Success stories and best practice
- Large-scale project with professional partner. Efficient construction and extensive high-quality installation
- Direct government relations and endorsement.

Lessons learned
- Community needs to be involved at an earlier stage of the project to ensure a high level of user acceptance
- Capacity building for the community including maintenance and fee collection will ensure long-term sustainability without additional expenditure. The community should introduce the fee collection system themselves. In-kind or small financial contributions would increase level of community ownership
- A hygiene education and sanitation element would ensure a more comprehensive impact
- The current provision of an average of only two litres per person per day could be increased if the full capacity of the boreholes is to be exploited.
- Individuals do not collect water from this site every day. People would access the water if more was made available by filling the tank more regularly.
The project provides water to 25,000 people in rural farming communities in the Eredo Local Government Area, Lagos State, through 25 small-scale boreholes with 25 hand pumps. The project was selected in collaboration with Lagos state and the local government of Eredo. Implementation was carried out by EnterpriseWorks, who engaged the community and provided training for maintenance as well as water sanitation and maintenance education.
Project history
The project was implemented in collaboration with local government authorities and EnterpriseWorks which ensured a high level of community involvement.

Structure of visit
- Meeting with local government at local government area office
- Visit to first borehole and hand pump and interview with operator
- Visit of household and traditional unprotected well. Interview with community members
- Visit of second borehole and interview with community members
- Visit of third borehole and cassava processing plant using water from the project. Interview with worker from plant
- Visit of fourth borehole and interview with operator
- Return to government office and debrief.

Project setup
The project included 25 small-scale boreholes with hand pumps in close proximity to 25 different rural farming communities in the Eredo Local Government Area, Lagos States. The pumps are maintained by trained operators and generally accessed by users within a 2km radius but also available for community members from further away.

Levy collection and use
No levy collection.

Water committee
No water committee but government involvement and training and community involvement by EnterpriseWorks to ensure community ownership.

Capacity for maintenance and repairs
Two operators were trained in managing and maintaining the hand pumps. As technology, it requires very little maintenance if handled correctly.

Official handover
October 2007

Creation of economic opportunities
Yes. Local households are using the water for small-scale commercial activities and in the local cassava processing plant.

Health impact
Community members stated general health improvements, particularly among children.

Sustainability and community ownership
Aggregate score: 34
Overall rating: High

Water policy integration and involvement of governmental organisations
Project selection though state and local government assistance ensures a high level of policy integration.

Success stories and best practice
- Out of the current projects this is the only Guinness Nigeria plc project to date that provides drinking water in partnership with an NGO which resulted in a significantly higher level of sustainability and community ownership.
1.5.3 Borehole Nassarawa, Nassarawa State

The project consists of five boreholes, each equipped with an elevated 63m$^3$ tank and six fetching points within a 2km radius, benefiting 100,000 people in total. The project was implemented by an engineering firm which ensured a very high quality of installation. Community involvement has so far been limited to a few elders and the local government. Additional activities to enhance the level of community involvement and capacity for maintenance are being planned.

**Project status at time of visit**
Completed

**Project partner and contact**
Ralob & Company Ltd (engineering firm)

**Project dates**
Start: March 2007
Completion: June 2007

**Number of beneficiaries**
Validated: 50,000
Originally: 50,000
Percentage reached: 100 per cent

**Method used to validate the number of beneficiaries**
Letter by local governor confirming the number of beneficiaries. The current water use is however slightly below the optimum of 10-15l/person/day, providing only an average of 9.6 litres/person/day (480m$^3$ per day) which could be increased if the boreholes were used to their full capacity; by filling the tanks more than twice a day.

**Population in the area**
Current data not available.

**Average household size in project area**
10

**Funding**
Required: £40,000
Source: In market (Guinness Nigeria plc)
Cost per Person: £0.80

**Technology**
Borehole with elevated tank and multi-tap fetching points.

**Most common water sources in the area**
Traditional wells, small streams, commercial vendors, rainwater harvesting and underground tanks.

**Used in conjunction with the project**
Likely.

**Water quality of project**
Good. Chlorine and PH-treated. Awaiting laboratory tests for PH-treated water.

**Current capacity**
5 x 63m$^3$ tanks = 315

**Current use**
360m$^3$ (tanks filled twice a day)

**Available documentation**
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project Area
- Baseline study
- Population census
- Water test results
- Government letter
Structure of visit
- Meeting with community representatives at first borehole and inspection of two fetching points
- Visit and inspection the three other boreholes, including two fetching points for each borehole
- Interviews with several benefiting community members.

Project setup
Five boreholes with elevated 60m³ tanks and fetching points within 2km radius of the borehole.

Levy collection and use
No levy.

Water committee
No water committee established. Elders involved during project implementation.

Capacity for maintenance and repairs
In planning.

Official handover
Planned for 2008.

Creation of economic opportunities
Water essential for typical economic activities in the area, particularly palm oil production.

Health impact
No clear evidence available.

Sustainability and community ownership
Aggregate score: 26
Overall rating: Medium

Water policy integration and involvement of governmental organisations
High. The project was selected and approved by the local government authority.

Success stories and best practice
- Large-scale project, efficient construction and extensive high-quality installation
- Direct government relations and endorsement.

Lessons learned
- Community needs to be involved at an earlier stage of the project to ensure a high level of user acceptance
- Capacity building for community including maintenance and fee collection will ensure long-term sustainability without additional expenditure. The community should introduce the fee collection system themselves. In-kind or small financial contributions would increase the level of community ownership
- A hygiene education and sanitation element would ensure more a more comprehensive impact
- The current provision of an average of only 9.6 litres/person/day could be increased if the full capacity of the boreholes were exploited by filling the tanks more than twice a day.
1.5.4 Borehole Suleja and Abukwarka, Niger State

The project consists of three boreholes, each equipped with an elevated 63m³ tank and nine fetching points within a 2km radius, benefiting 50,000 people in total. The project was implemented by an engineering firm, which ensured a very high quality of installation. Community involvement has so far been limited to a few elders and the local government. Additional activities to enhance the level of community involvement and capacity for maintenance are being planned.

Project status at time of visit
Completed

Project partner and contact
New Millennium Developers Ltd (engineering firm)

Project dates
Start: April 2007
Completion: June 2007

Number of beneficiaries
Validated: 50,000
Originally: 50,000
Percentage reached: 100 per cent

Method used to validate the number of beneficiaries
Letter by local governor confirming the number of beneficiaries. The current water use is however slightly below the optimum of 10-15l/person/day with an average of 7.2l/person/day which could be increased if the full capacity of the boreholes was be exploited.

Population in the area
4,082,558 (Niger state, 2005 estimate)

Average household size in project area
10

Funding
Required: £48,162
Source: In market (Guinness Nigeria plc)
Cost per person: £2.41

Technology
Three boreholes with elevated tanks and multi-tap fetching points.

Most common water sources in the area
Not investigated at time of visit
Used in conjunction with the project? n/a

Water quality of project
Good. Chlorine and PH-treated. Awaiting laboratory tests for PH-treated water.

Current capacity
3x 63m³ tanks=189m³

Current use
360m³ (all tanks are filled twice a day)

Available documentation
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results
- Government letter
Structure of visit
- Visit of all three borehole sites together with engineer
- Transect walk through all of the three benefiting communities
- Inspection of all nine fetching points
- Interviews with community members
- Meeting with government official.

Project setup
Three boreholes at different sites with elevated 60m³ tanks and three fetching points within 2km radius from borehole, each with four taps.

Levy collection and use
No levy.

Water committee
No water committee currently established but one is being planned. Elders were consulted before and during implementation.

Capacity for maintenance and repairs
More community involvement and capacity building is being planned. Operators have yet to be trained and supported by the government.

Official handover
Planned for 2008

Creation of economic opportunities
No direct links to economic activities.

Health impact
Clear evidence not available.

Sustainability and community ownership
Aggregate score: 24
Overall rating: Medium

Water policy integration and involvement of governmental organisations
High. Project was selected and approved by local government authorities.

Success stories and best practice
- Large-scale project, efficient construction and extensive high-quality installation
- Direct government relations and endorsement.

Lessons learned
- Community needs to be involved at an early stage of the project to ensure a high level of user acceptance
- Capacity building for community including maintenance and fee collection will ensure longer term sustainability without additional expenditure. The community should introduce the fee collection system themselves. In-kind or small financial contribution would also increase level of community ownership
- A hygiene education and sanitation element would ensure a more comprehensive impact
- Project was delayed due to land issues for the boreholes, tanks and fetching points. Community land was finally obtained through the assistance of elders
- Community needs to be educated about the value and cost of water as they are currently wasteful with the water because it is free
- The current provision of an average of only 7.6 litres/person/day could be increased if the full capacity of the boreholes were exploited.
This project was initiated by the GNplc Lagos sales team and provides drinking water through a borehole, 5m³ tank and a fetching point with four taps to a housing complex in Ikeja, Lagos. The project was implemented in conjunction with an exclusive advertising agreement for 28 outlets next to the housing complex, and located in a popular entertainment area. The arrangement included the water facility and other community improvements. However, the project is of limited use to the community because the water pump relies on electricity which is only available for about three days a week. The installed tank does not have enough capacity to provide water during the days when the pump does not operate.

Project status at time of visit
Completed

Project partner and contact
Puzmax International Limited

Project dates
Start: April 2007
Completion: June 2007

Number of beneficiaries
Validated: 500
Originally: n/a
Percentage reached: n/a

Method used to validate the number of beneficiaries
Interview with residents of the complex were used to establish the approximate number of people living within the serviced complex.

Population in the area
7,937,932 (Metropolitan Lagos, preliminary 2006 census).

Average household size in project area
Current data not available.

Funding
Required: tbc
Source: In market (Guinness Nigeria plc)
Cost per person: tbc

Technology
Borehole with 5m³ tank and four taps.

Most common water sources in the area
Not investigated at time of visit.

Used in conjunction with the project?
Not investigated at time of visit.

Water quality of project
Not tested at time of visit.

Current capacity
Current information not available.

Current use
Current information not available.

Available documentation
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of Project area
- Baseline study
- Population census
- Water test results
Project history
The project was implemented in conjunction with an exclusive advertising agreement for 28 outlets next to the housing complex. The arrangement included the water facility and other community improvements.

Structure of visit
- Visit of borehole and fetching point
- Interview with several residents
- Transect walk through community.

Project setup
Borehole with small 5m³ tanks and four taps.

Levy collection and use
No levy.

Water committee
No water committee established.

Capacity for maintenance and repairs
Planned for 2008

Official handover
June 2007

Creation of economic opportunities
No direct links to economic activities.

Health impact
No direct data available.

Sustainability and community ownership
Aggregate score: 14
Overall rating: Low

Water policy integration and involvement of governmental organisations
To be investigated further.

Success stories and best practice
Initiated by a highly motivated sales team, leading to contributions to a water of life project.

Lessons learned
- Tying a community investment project directly to advertising creates obstacles for full community ownership as the community do not view the project as theirs to own but rather a gift from the company with conditions attached
- A feasibility study is important to ensure the right kind of technology is employed. A much larger tank or a diesel powered-generator would have provided water to the community when there are power shortages.
This project is one out of three in Nigeria which were implemented before the 1 Million Challenge. However, the additional beneficiaries impacted after the project was completed are accounted for in the 1 Million Challenge because Guinness Nigeria plc funded the maintenance of the project by providing diesel for the generator, chemicals for the water treatment, paying for the operator, servicing the equipment regularly, and making regular visit to ensure the smooth functioning of the facility.

According to government estimates, the project provides water for about 125,000 people through a borehole with an elevated tank and a distribution point with 20 taps. The 45m³ (10,000 gallons) tank is filled twice a day.

While there is a clear benefit for the community through the improved access to safe drinking water, the community involvement of this project is low due to the project being completely managed by Guinness Nigeria plc. The project is currently only sustained through maintenance funds by Guinness Nigeria plc.

**Project status at time of visit**
Completed

**Project partner and contact**
Seg Malisen Limited

**Project dates**
Start: Pre-2007
Completion: 2005

**Number of beneficiaries**
Validated: 6000
Originally: n/a
Percentage reached: n/a

**Method used to validate the number of beneficiaries**
Because of the resources Guinness Nigeria plc has committed toward the project over the last two years since its completion, the average population growth rate in Nigeria (2.4 per cent p.a.) was applied to estimate number of beneficiaries. The maintenance cost for the last two years amounted to three per cent of the overall project cost. See Appendix 2.4 for more detailed calculations.

**Population in the area**
650,000

**Average household size in project area**
8 – 10

**Funding**

**Required:** £82,000

**Source:** In market (Guinness Nigeria plc)

**Cost per person:** £0.66

**Technology**
Borehole with elevated tank and multi-tap fetching points.

**Most common water sources in the area**
Not investigated at time of visit.

**Used in conjunction with the project?** n/a

**Water quality of project**
Good. Chlorine and PH-treated.
Awaiting laboratory tests for PH-treated water.

**Current capacity**
45m³ tank, pump capacity 240m³/day

**Current use**
45m³ tank filled twice a day = 90m³/day

**Available documentation**
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results
Structure of visit
- Visit of borehole and fetching point
- Interview with users and operators.

Project setup
Borehole with treatment facility and fetching point with 20 taps in front of borehole.

Levy collection and use
No levy

Water committee
No water committee established.

Capacity for maintenance and repairs
Project is maintained by contractor.

Official handover
2004

Creation of economic opportunities
No direct links to economic activities.

Health impact
No clear evidence available.

Sustainability and community ownership
Aggregate score: 24
Overall rating: Medium

Water policy integration and involvement of governmental organisations
The project was selected and implemented in consultation with the local government.

Success stories and best practice
- Large-scale project with professional partner. Efficient construction and extensive high-quality installation
- Direct government relations and endorsement.

Lessons learned
- Community needs to be involved at an earlier stage to ensure a higher level of user acceptance
- Capacity building for community including maintenance and fee collection will ensure longer term sustainability without additional expenditure if community introduces fee collection system. In-kind or small financial contribution would also increase level of community ownership
- A hygiene education and sanitation element would ensure a more comprehensive impact
- Community should be educated about the value and cost of water.
This project is one out of three in Nigeria which were implemented before the 1 Million Challenge. However, the additional beneficiaries impacted after the project was completed are accounted for in the 1 Million Challenge because Guinness Nigeria plc funded the maintenance of the project by providing diesel for the generator, chemicals for the water treatment, paying for the operator, servicing the equipment regularly, and making regular visit to ensure the smooth functioning of the facility.

According to government estimates, the project provides water for about 75,000 people through a borehole with an elevated tank and five fetching points with one tap within a 2km radius.

While there is a clear benefit for the community through the improved access to safe drinking water, the community involvement of this project is low due to the project being completely managed by Guinness Nigeria plc. There are no associated costs for community members; the project is currently only sustained through maintenance funds by Guinness Nigeria plc.

Project status at time of visit
Completed

Project partner and contact
WaterAid/ Guinness Nigeria plc engineering team.

Project dates
Start: Pre-F07
Completion: 2004

Number of beneficiaries
Validated: 7,500
Originally: n/a
Percentage reached: n/a

Method used to validate the number of beneficiaries
Because of the resources Guinness Nigeria plc has committed to over the last three years since the project completion, the average population growth rate in Nigeria (2.4 per cent p.a.) was applied to the estimated number of beneficiaries, as obtained from the local government. The maintenance cost over the last three years amounted to 13 per cent of the overall project cost. The population growth over three years amounts to 7 per cent of the original number beneficiaries (75,000, according to government estimates). Therefore, a medium of 10 per cent of the original number of beneficiaries is taken into account for the 1 Million Challenge. Please see Appendix 2.4 for more detailed calculations.

Population in the area
Official census not available.

Average household size in project area
8 – 10

Funding
Required: £28,000
Source: In market (Guinness Nigeria plc)
Cost per person: £0.37

Technology
Borehole with elevated tank and five fetching points.

Most common water sources in the area
Not investigated at time of visit.

Used in conjunction with the project?
N/a

Water quality of project
Good. Chlorine and PH-treated. Awaiting laboratory tests for PH-treated water.

Current capacity
Technical information not available.

Current use
Technical information not available.

Available documentation
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results

Population in the area
Official census not available.

Average household size in project area
8 – 10

Funding
Required: £28,000
Source: In market (Guinness Nigeria plc)
Cost per person: £0.37

Technology
Borehole with elevated tank and five fetching points.

Most common water sources in the area
Not investigated at time of visit.

Used in conjunction with the project?
N/a

Water quality of project
Good. Chlorine and PH-treated. Awaiting laboratory tests for PH-treated water.

Current capacity
Technical information not available.

Current use
Technical information not available.

Available documentation
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results
Structure of visit
- Visit of borehole and fetching points
- Interview with users and operators
- Transect walk through community.

Project setup
Borehole with treatment facility and five fetching points within a 2km radius with one tap.

Levy collection and use
No levy.

Water committee
No water committee established.

Capacity for maintenance and repairs
Project is maintained by contractor.

Official handover
Planned for 2008.

Creation of economic opportunities
No direct links to economic activities.

Health impact
No clear evidence available.

Sustainability and community ownership
Aggregate score: 24
Overall rating: Medium

Water policy integration and involvement of governmental organisations
The project was selected and implemented in consultation with the local government.

Success stories and best practice
- Large-scale project, efficient construction and extensive high-quality installation
- Direct government relations and endorsement.

Lessons learned
- Community needs to be involved at an earlier stage to ensure a higher level of user acceptance
- Capacity building for community including maintenance and fee collection will ensure longer term sustainability without additional expenditure if community introduces fee collection system. In-kind or small financial contribution would also increase level of community ownership
- A hygiene education and sanitation element would ensure a more comprehensive impact
- Community should be educated about the value and cost of water.
This project is one out of three in Nigeria which were implemented before the 1 Million Challenge. However, the additional beneficiaries impacted after the project was completed are accounted for in the 1 Million Challenge because Guinness Nigeria plc funded the maintenance of the project by providing diesel for the generator, chemicals for the water treatment, paying for the operator, servicing the equipment regularly, and making regular visits to ensure the smooth functioning of the facility.

According to government estimates, the project provides water for about 125,000 people through one borehole with an elevated tank and a distribution point with 14 taps in front of the borehole.

While there is a clear benefit for the community through the improved access to safe drinking water, the community involvement of this project is low due to the project being completely managed by Guinness Nigeria plc. There are no associated costs for community members and the project is currently only sustained through maintenance funds by Guinness Nigeria plc.

**Project status at time of visit**
Completed

**Project partner and contact**
Guinness Nigeria plc engineering team.

**Project dates**
Start: Pre-F07
Completion: 1997

**Number of beneficiaries**
Validated: 9,000
Originally: n/a
Percentage reached: n/a

**Method used to validate the number of beneficiaries**
Because of the resources Guinness Nigeria plc has committed to over the last ten years since the project’s completion, the average population growth rate in Nigeria (2.4 per cent p.a.) was applied to the estimated number of beneficiaries (125,000, as obtained from the local government). The maintenance cost over the last 10 years amounted to about 15 per cent of the estimated project cost. For more details on the calculations, see Appendix 2.4.

**Population in the area**
371,000

**Average household size in project area**
8 – 10

**Funding**
Required: £29,000
Source: In market (Guinness Nigeria plc)
Cost per person: £0.32 per year since 1997

**Technology**
Borehole with elevated tank and multi-tap fetching points.

**Most common water sources in the area**
Not investigated at time of visit.

**Used in conjunction with the project?** n/a

**Water quality of project**
Good. Chlorine and PH-treated. Awaiting laboratory tests for PH-treated water.

**Current capacity**
Technical information not available.

**Current use**
Technical information not available.

**Available Documentation**
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results
Structure of visit
- Visit of borehole and fetching points
- Interview with users and operator.

Project setup
Borehole with treatment facility and fetching point in front of borehole with 14 taps.

Levy collection and use
No levy.

Water committee
No water committee established.

Capacity for maintenance and repairs
Project is maintained by contractor.

Official handover
2004

Creation of economic opportunities
No direct links to economic activities.

Health impact
No clear evidence available.

Sustainability and community ownership
Aggregate score: 24
Overall rating: Medium

Water policy integration and involvement of governmental organisations
The project was selected and implemented in consultation with the local government.

Success stories and best practice
- Large-scale project, efficient construction and extensive high-quality installation
- Direct government relations and endorsement.

Lessons learned
- Community needs to be involved at an earlier stage to ensure a higher level of user acceptance
- Capacity building for community including maintenance and fee collection will ensure longer term sustainability without additional expenditure if community introduces fee collection system. In-kind or small financial contribution would also increase level of community ownership
- A hygiene education and sanitation element would ensure a more comprehensive impact
- Community should be educated about the value and cost of water.
The water filter project creates a social enterprise system that produces, distributes and promotes filters for household water use in Ghana. The locally produced water filter is used to provide safe drinking water in areas where high quality piped or well water is not available. The project has developed a market for the locally made filter in selected communities, using a social marketing campaign strategy to improve public health as well as establishing a profitable and sustainable supply chain, creating local jobs and income.

Diageo Foundation funded a pan-Ghanaian project to foster entrepreneurial structures based on clean drinking water provision, in collaboration with EnterpriseWorks. As opposed to all other Water of Life projects which are based on the creation of a physical asset for the longer term, this project is based on the introduction of a technology and distribution structure. The filters will have to be replaced after three years while the containers used in conjunction with the filter can be used for a longer period.

**Project status at time of visit**
Complete

**Project partner and contact**
Atsu Titiati, Project Manager
EnterpriseWorks
atsu@africaonline.com.gh
Mobile: +233244759435

**Project dates**
Start: January 2007
Completion: October 2007

**Number of beneficiaries**
Validated: 32,200
Originally: 50,000
Percentage reached: 64 per cent

**Method used to validate the number of beneficiaries**
The number of beneficiaries was established using the number of distributed filters and the average number of beneficiaries according to the distribution method. Most of the filters where donated to households, schools and hospitals reaching 15 people per filter on average. Some filters were subsidised, reaching an average of seven people per household, taking into account the average household size and the fact that some households could afford more than one filter.

A significant proportion of Diageo Foundation funds were used to establish and market the project. For example, 400 filters where used for demonstration purposes only and 4,600 filters were distributed on a subsidised basis. This resulted in a lower number of beneficiaries (see Appendix 3.3.2 for details).

**Population in the area**
Greater Accra: 2.9m
Eastern Region: 2.1m
Ashanti Region: 3.6m
Central Region: 1.6m

**Average household size in project area**
10

**Funding**
**Required:** £75,000
**Source:** Diageo Foundation
**Cost per person:** £2.33

**Technology**
Ceramic water filters with plastic container and tap.

**Most common water sources in the area**
Earth dams, and unprotected wells and springs.

**Used in conjunction with the project?** Yes. All water sources can be used in combination with the filters.

**Water quality of project**
A study commissioned by the Diageo Foundation showed that the Filtron ceramic filter achieved reliable and consistent removal of bacteria (of sanitary significance) from drinking water contaminated with sewage effluent. The removal efficiency - approximately one bacterium passes through for every 99 that are retained by the ceramic filter.

**Current capacity**
20 litres for container and 7.1 litres for ceramic filters.

**Current use**
Flow through rate: One to two litres per hour.

**Available documentation**
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results
Project history
The project promoted the dissemination of Ghanaian made ceramic water filters to households as a solution for improving water quality. The distribution was carried out via existing private enterprises. Retailers also earn a commission on the sale of each unit. Initially, retailers were provided with the products on credit and were assisted with publicity and marketing assistance. As the market developed the retailers were weaned off support. They now deal directly with the manufacturer or wholesaler, purchasing the units for cash. In order to reach poorer households, a voucher system was introduced to provide a targeted subsidy for selected users.

Structure of visit
- Visit and interview with local retailer
- Visit to local school (which uses the filters) and interview with principal
- Visit to two local communities including interviews with local retailer, elders, 10 households and inspection of water sources (borehole with hand pump and lake)
- Extensive discussion with project manager at EnterpriseWorks office.

Project setup
See project history.

Levy collection and use
The filters were subsidised at a reduced cost for low income families.

Water committee
n/a

Capacity for maintenance and repairs
Water retailers follow up with the community and schools to replace filters if broken and educate them in maintenance and cleaning.

Official handover
At time of purchase/donation.

Creation of economic opportunities
Yes. The distribution included the establishment of a retailer network, the aim of which is to provide a self-sufficient structure for replacement sales and repairs when the filters have to be replaced after three years.

Health impact
Testing undertaken by universities and independent laboratories worldwide confirm that these locally made filters filter water that meets WHO standards for bacteria and NTU (turbidity unit) by removing all harmful bacteria that cause waterborne diseases. In Ghana, similar tests conducted by the Water Research Institute confirmed the efficiency of the water treatment.

Sustainability and community ownership
Aggregate Score: 26
Overall rating: Medium

Water policy integration and involvement of governmental organisations
To be investigated further.

Success stories and best practice
- The project fostered entrepreneurship and self-stewardship among target communities and increased the level of water and sanitation education significantly
- The project has been one of the flagship projects of Water of Life, partly due to the comprehensive and excellent monitoring and reporting from the implementation partner of the positive benefits accruing.

Lessons learned
- The project was funded from different financiers which complicated the interaction with the implementation partner.
1.6.2 Water Filter Project, Ghana – Guinness Ghana Breweries Ltd

Based on core funding from the Diageo Foundation, this project provided an emergency water and sanitation response in the Northern Region of Ghana. 2,000 filters were distributed, benefiting 30,000 people in total, which would have otherwise suffered from very poor hygienic conditions. The beneficiaries will be able to use the filters for three years, after which they will be able to buy a replacement filter while continuing to use the container.

Project status at time of visit
Complete

Project partner and contact
Atsu Titiati, Project Manager
EnterpriseWorks
atsu@africaonline.com.gh
Mobile: +233244759435

Project dates
Start: Pre 2007
Completion: 2007

Number of beneficiaries
Validated: 30,000
Originally: 30,000
Percentage reached: 100 per cent

Method used to validate the number of beneficiaries
The number of beneficiaries was established using the number of distributed filters and the average number of beneficiaries according to the distribution method. Most of the filters where donated to households, schools and hospitals in an area that were affected by floods, reaching 15 people per filter on average (see Appendix 3.3.2 for details).

Population in the area
Northern Region: 1.8m

Average household size in project area
15

Funding
Required: £30,000
Source: In market (Guinness Ghana Breweries Ltd)
Cost per person: £1.00

Technology
Ceramic water filters with plastic container and tap.

Most common water sources in the area
Earth dams, and unprotected wells and springs
Used in conjunction with the project? Yes – all water sources can be used in combination with the filter.

Water quality of project
A study commissioned by the Diageo Foundation showed that the Filtron ceramic filter achieved reliable and consistent removal of bacteria (of sanitary significance) from drinking water contaminated with sewage effluent. The removal efficiency - approximately one bacterium passes through for every 99 that are retained by the ceramic filter.

Current capacity
n/a

Current use
n/a

Available documentation
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results
**Project history**
Based on the core funding from the Diageo Foundation, this project provided an emergency water and sanitation response in the Northern Region of Ghana. 2,000 filters were distributed, benefiting 30,000 people in total, which would have otherwise suffered from very poor hygienic conditions. The beneficiaries will be able to use the filters for three years, after which they will be able to buy a replacement of the filter while continuing to use the container used in conjunction with the filter. Sanitation messages were carried out when the filters were distributed.

**Structure of visit**
Project validated based on information received from Diageo Foundation’s visit.

**Levy collection and use**
The filters were donated for free.

**Water committee**
n/a

**Capacity for maintenance and repairs**
n/a

**Official handover**
n/a

**Creation of economic opportunities**
No direct economic opportunities as filters were distributed as part of an emergency response.

**Health impact**
Testing undertaken by universities and independent laboratories worldwide confirm that these locally made filters produce water that meets WHO standards for bacteria and NTU (turbidity unit) by removing all harmful bacteria that cause waterborne diseases. In Ghana, similar tests conducted by the Water Research Institute confirmed the efficiency of the water treatment.

**Sustainability and community ownership**

- **Aggregate Score:** 26
- **Overall rating:** Medium

**Water policy integration and involvement of governmental organisations**
To be investigated further.

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**Success stories and best practice**
- The project has been one of the flagship projects of Water of Life, partly due to the comprehensive and excellent monitoring and reporting from the implementation partner of the positive benefits accruing.

**Lessons learned**
- Providing drinking water through a disaster recovery programme does not allow for high levels of sustainability due to the short-term rapid response nature of the project.
Inspired by the Diageo Foundation funded water filters project, the Diageo Africa leadership conference donated 2,000 filters to schools and hospitals. The project was carried out by EnterpriseWorks. For more details on EnterpriseWork's approach see Appendix 1.6.1.

1.6.3 Water Filter Project, Ghana – Diageo Africa leadership conference

Project status at time of visit
Complete

Project partner and contact
Atsu Titiati, Project Manager
EnterpriseWorks
atsu@africaonline.com.gh
Mobile: +233244759435

Project dates
Start: Pre 2007
Completion: 2007

Number of beneficiaries
Validated: 30,000
Originally: 20,000
Percentage reached: 150 per cent

Method used to validate the number of beneficiaries
The number of beneficiaries was established using the number of distributed filters and the average number of beneficiaries according to the distribution method. The filters funded by the Diageo Africa leadership conference were donated to schools and hospitals, benefiting an average of 15 people/filter.

Population in the area
Greater Accra: 2.9m
Eastern Region: 2.1m
Ashanti Region: 3.6m
Central Region: 1.6m

Average household size in project area
Not applicable as the target area were schools.

Funding
Required: £30,000
Source: Donation by Africa Leadership Forum
Cost per person: £1.00

Technology
Ceramic water filters with plastic container and tap.

Most common water sources in the area
Earth dams, and unprotected wells and springs
Used in conjunction with the project? Yes – all water sources can be used in combination with the filter.

Water quality of project
A study commissioned by the Diageo Foundation showed that the Filtron ceramic filter achieved reliable and consistent removal of bacteria (of sanitary significance) from drinking water contaminated with sewage effluent. The removal efficiency - approximately one bacterium passes through for every 99 that are retained by the ceramic filter.

Current capacity
n/a

Current use
n/a
Available documentation
- Project proposal
- Progress reports
- Final report
- Technical specifications
- Geological survey
- Map of project area
- Baseline study
- Population census
- Water test results

Project history
Based on core funding from the Diageo Foundation, this project funded the donation of 2,000 filters to schools and hospitals, providing improved access to safe drinking water for 30,000 people. The beneficiaries will be able to use the filters for three years, after which they will be able to buy a replacement filter while continuing to use the container.

Structure of visit
Project validated based on Diageo Foundation’s visit.

Project setup
See project history.

Levy collection and use
The filters were donated for free. After three years, replacement filters will be sold at one third of the cost.

Water committee
n/a

Capacity for maintenance and repairs
n/a

Official handover
n/a

Creation of economic opportunities
Yes. The implementation partner worked to establish a water filter retailer network, the aim of which is to provide a self-sufficient structure for replacement sales and repairs when the filters have to be replaced after three years.

Health impact
Testing undertaken by universities and independent laboratories worldwide confirm that these locally made filters produce water that meets WHO standards for bacteria and NTU (turbidity unit) by removing all harmful bacteria that cause waterborne diseases. In Ghana, similar tests conducted by the Water Research Institute confirmed the efficiency of the water treatment.

Sustainability and community ownership
Aggregate score: 26
Overall rating: Medium

Water policy integration and involvement of governmental organisations
To be investigated further.

Success stories and best practice
- The project has been one of the flagship projects of Water of Life, partly due to the comprehensive and excellent monitoring and reporting from the implementation partner of the positive benefits accruing. It was this aspect of the project which motivated the leadership team to make their donation. This project also highlighted the success of a highly motivated and hands-on leadership team.

Lessons learned
- The overall project was funded from different financiers which complicated the interaction with the NGO partner.
Appendix 2 – Methodology tools for field visits

2.1 Methodology overview

2.2 Checklists used when holding interviews, meetings or discussions with different stakeholders

   2.2.1 Checklist A: National and/or regional stakeholders
   2.2.2 Checklist B: Local Government and project partner stakeholders
   2.2.3 Checklist C: Community organisations and primary stakeholders
   2.2.4 Checklist D: Private sector stakeholders

2.3 Calculations for Venture Africa Project in Kechene, Ethiopia

2.4 Calculations for Guinness Nigeria plc projects implemented before the 1 Million Challenge
2.1 Methodology Overview

The validation visits occurred between the months of April and December 2007 and involved visits to 29 Water of Life water and sanitation projects in nine countries around Africa and a desk validation of two more projects. One to two days were allocated for each visit, which were carried out to fulfil two purposes - firstly to validate the number of beneficiaries reached against that initially proposed, and secondly to evaluate the sustainability and the level of community ownership.

Data collection
Data was obtained through primary and secondary resources, including both quantitative and qualitative data. Primary data was collected through structured interviews with the implementation partner, Diageo in-market employees, national and regional government staff, private sector artisans, water vendors and direct beneficiaries. Focus groups were also held with direct and indirect beneficiaries, the implementation partner and water and sanitation committees. Primary data was also collected by observation via transect walks of the site and testing of the water quality by taste and laboratory tests where available. Secondary data included geological and chemical information on recovery rate of the aquifer and water quality, project information from the implementation partner and water operators, policy integration information from government authorities and budgetary expenses from the donor.

Definitions
The first purpose of each visit was to validate the number of beneficiaries. In this study, validation was taken to mean the cross-referencing of available data to assess the reliability of information. Beneficiaries were defined as those people collecting at least 10-15 litres of water a day for drinking, cooking and personal hygiene from an improved drinking water source, which includes household connections, public standpipes, boreholes, protected dug wells, protected springs, rainwater collection and water purification methods. Beneficiaries are calculated as those who did not have to travel more than two kilometres from their dwelling to reach the improved water source. This definition is an extension of the WHO and UNICEF Joint Monitoring Programme (JMP) definition to account for the current working definitions used by NGOs and partners on the ground in Africa.

The evaluation process also analysed the sustainability of each project and the level of community ownership. Sustainability was measured against eight factors: policy environment; institutional arrangements; technology; community and social aspects; financing and cost recovery; natural environment; project process; and linkages (training, information, education, communication, private sector). Community ownership was measured against community involvement and contribution, the capacity to maintain the project and to have the resources for repairs, equal representation, participatory and democratic governance structures, community relationships with the implementation partner and the extent to which the community and not the donor is regarded as the owner of the project assets.

Validation analysis
Once the reliability of information received was assessed, the information was analysed against the standard definition of ‘beneficiary’ as well as factors such as: population size and density; household size and number of households; amount of levy charged for water and financial administration; yield and reliability of the technology employed; water quality and the recovery rate of the aquifer. A standard validation formula to identify the number of beneficiaries was not developed due to the diversity and complexity of the projects. The formula, or weighting of different variables to ascertain the validated number of beneficiaries differed for most projects. It was recognised that there is no agreed universal standard on how to measure, evaluate and define water projects. To understand better the reality on the ground, a contextualised approach was taken to ensure the number of beneficiaries calculated was a truer reflection of reality. More detail can be found in each project validation matrices in appendix one.

Evaluation analysis
The evaluation process was based on a cross-referencing of available information and data. Each project was ranked against a sustainability and community ownership score of 1 (low), 2 (medium) and 3 (high) and shown below:

Each score was aggregated and an overall score was given to each project on their sustainability and community ownership. Aggregate scores ranged from 14-22 for low, 23-32 for medium and 33-42 for high.

All projects were given a sustainability level for each factor, which was then aggregated into one overall sustainability score in three levels: low, medium and high. The community ownership score was analysed and aggregated in the same way but considered the following factors and indicators:

- Whether the community provided financial and/or in-kind contributions to the project
- Whether elders and/or traditional leaders of the community were involved
- Whether gender aspects were considered and women were integrated into the project
- What track record and relationship the implementation partner has with the community
- Whether a water and sanitation committee was established
- The role of the community in the management of the project
- Whether the community approached the implementation partner and donor; and
- Whether local government relations with the community are strong and representative.
<table>
<thead>
<tr>
<th>Criterion</th>
<th>Low Level</th>
<th>Medium Level</th>
<th>High Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>Locally inappropriate or incomplete technology – no improved access to safe drinking water</td>
<td>Technology provides improved access but requires external maintenance</td>
<td>Locally appropriate technology/ integrated in existing water system</td>
</tr>
<tr>
<td>Financing and cost recovery</td>
<td>No levy collection for cost recovery, project relies on external funds for maintenance and repairs</td>
<td>Levy collection in place but no adequate system to secure funding for longevity of project</td>
<td>Sufficient levy collection with transparent structure to secure maintenance and create savings for major repairs</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Technical skills not available to community for maintenance when needed</td>
<td>Some technical skills available for maintenance, but not all</td>
<td>Technical skills for all maintenance processes available</td>
</tr>
<tr>
<td>Spare parts</td>
<td>Maintenance equipment and spare parts not available</td>
<td>Some availability of spare parts but not for all repairs</td>
<td>Spare parts readily available or can be easily obtain</td>
</tr>
<tr>
<td>Institutional arrangements</td>
<td>No village organisation has responsibility for project, community would not know what to do in event of major breakdown</td>
<td>Village has organisation but is not managing project satisfactorily but responsibility unclear in case of major breakdown</td>
<td>Village organisation actively managing system to everyone’s satisfaction and confident that project technology would be quickly repaired in case of major breakdown</td>
</tr>
<tr>
<td>Training</td>
<td>No-one in village received any structured training from project partner or government authority</td>
<td>Some people trained but cannot fully remember or apply what was learned</td>
<td>Useful training was provided which still benefits trainees now</td>
</tr>
<tr>
<td>Integrated sanitation and hygiene component</td>
<td>Project does not include a sanitation and hygiene component</td>
<td>Project includes sanitation and hygiene sensitisation</td>
<td>Project includes sanitation and hygiene sensitisation and facilities</td>
</tr>
<tr>
<td>Project process</td>
<td>The project was ‘given’, community not offered choice if they wanted to participate</td>
<td>Community was asked if they wanted to participate</td>
<td>The community initiated the project themselves</td>
</tr>
<tr>
<td>Community contribution</td>
<td>Community did not make any financial or in-kind contribution towards the project</td>
<td>Community made significant in-kind contribution towards the project</td>
<td>Community made financial contribution towards the project</td>
</tr>
<tr>
<td>Leadership involvement</td>
<td>Elders/traditional leaders were not consulted in the project process</td>
<td>Elders/traditional leaders were consulted but are not involved in project management</td>
<td>Elders/traditional leaders were consulted and are involved in project management</td>
</tr>
<tr>
<td>Water committee</td>
<td>No community organisation has responsibility for water point</td>
<td>Community has organisation but is not managing point satisfactorily and does not include women</td>
<td>Democratic community organisation actively managing project to everyone’s satisfaction and includes adequate representation of women</td>
</tr>
<tr>
<td>Involvement of local government</td>
<td>Local government not involved in selection and project design</td>
<td>Local government involved in selection of project but not</td>
<td>Local government consulted each stage of project and involved in securing the long-term sustainability of the project</td>
</tr>
<tr>
<td>Level of water supply</td>
<td>Water supply only sufficient for drinking (average of 2 litres per person per day), people still have to rely on other sources all the time</td>
<td>Water supply only sufficient drinking and cooking (average of 10 litres per person per day), users still have to rely on other water sources to meet their full need</td>
<td>Water supply only sufficient for cooking, drinking and bathing (average of 10-15 litres per person per day), the water source always meets everyone’s needs</td>
</tr>
<tr>
<td>Access/inclusion</td>
<td>Some people never get access to the water point(s) even when they want to use; distance to fetching points does not improve access</td>
<td>Some people sometimes do not get access to the water point(s), distance to fetching points adequate for most community members</td>
<td>Everyone who want to use the water point(s) gains access all the time or during a time agreed by the whole community, the great majority of the community has fetching points within adequate distance</td>
</tr>
</tbody>
</table>
Challenges
The diversity and complexity of all projects made development of a consistently applied validation formula virtually impossible. This also stems from the fact that there are a lack of standard indicators and methodologies in the water and sanitation world, which partly reflects the different realities on the ground. Like-for-like comparisons between projects are therefore a challenge, however applying a more fluid validation methodology captures the real-world variation in the way the 1 Million Challenge has been approached in each market.

Additionally, many of the projects visited had yet to be completed. The validated number for those projects is consequently a forecast of how many people the project will reach by the end of the year. Finally, lack of data availability and time constraints did not allow a thorough analysis of the economic and health impacts of each project. However, information was collected from the community, implementation partner and other key stakeholders, providing anecdotal evidence of the indirect benefits of each project.

Benefits of approach
Collecting provider-based information and consumer-based information is increasingly being recognised as best practice in water supply and sanitation assessments as many previous reports only analysed provider-based information (Joint Monitoring Programme WHO: 2000). This report aims to take water supply assessment one step further. Rather than relying solely on secondary data, independent observations were added as another source of data. The triangulation of multiple sources of information enhances the rigour and reliability of the assessment and onus was placed on ensuring an accurate representation of samples. For example, members of the water and sanitation committees were asked how they were elected and for how long they would be on the committee.

The current approach also aims to take a more accurate account of the actual use of water facilities. This is why a working NGO definition of ‘beneficiary’ was applied rather than the Joint Monitoring Programme (JMP) for Water Supply and Sanitation definition, which is global in reach. The JMP also recognises that it does not discount coverage figures, whereas, the approach undertaken in this study factors in intermittence or poor quality of water supplies by analysing capacity for repairs, training of appropriate personnel and community usage. Taking a more contextualised approach and not applying a ‘one-size-fits-all’ formula has allowed this study to more accurately reflect the reality of water use and project impact, which was the intended main aim of the validation and evaluation process.
2.2 Checklists used when holding interviews, meetings or discussions with different stakeholders

2.2.1 Checklist A: National and/or regional stakeholders

Demographic or baseline data
- Data available for project area at regional/national level?
- Plans to improve data on rural water supply?

Policy
- National water policy in place? What stage is it at?
- Does it cover standardisation, local manufacture, gender, and cost recovery?
- Is the policy being implemented? What are the main constraints?

Institutional arrangements
- Matrix of key stakeholders at national/regional level?
- Roles and responsibilities of stakeholders clearly defined?
- Communication and coordination between levels?
- Relationship with local level structures?
- Role of private sector with respect to water supply technology?
- Role of NGOs in rural water supply projects?

Funding and flow of funds
- How is funding arranged for rural water supply sector?
- How do funds flow to local level?
- How are recurrent costs paid for?
- What are the cost sharing arrangements for water supply projects?
- What is the role of Diageo in the allocation of funds?

Resources
- Are there adequate resources at national/regional level to fulfil roles?
- What areas are most lacking?

Capacity building
- Have staff at national/regional level received capacity building?
- Do they provide capacity building to local government or other partners?
2.2.2 Checklist B: Local government and project partner stakeholders

**Policy**
- Are national policies aware of community water supply projects?
- Are staff trying to implement the policy?
- What are the constraints?

**Institutional arrangements**
- Organogram of rural water supply?
- Responsibility for mobilisation, installation and maintenance of water supply projects?
- Are roles and responsibilities clearly defined?
- What constraints are there to fulfilling roles?
- What is relationship like with national/regional level and communities?
- What is the role of the community in water supply maintenance?
- Are NGOs and/or private sector involved in any water supply-related activities?

**Water supply technology issues**
- What percentage of the water supply technology are functioning at present?
- What types of water supply technologies are installed? Are they standardised?
- Is there a standard design for the water technology installation?
- Where are the water technologies obtained? Where are they manufactured?
- Where are spares available? Who buys them? Is there adequate supply?
- What are the commonest causes of water technology failure?
- Is there a system in place for carrying out major repairs?
- What is the design criterion for number of users per technology?

**Community and social issues**
- What mobilisation work is done with communities for water supply projects?
- Have staff been trained in participatory approaches?
- What type of sources do people use if they do not have access to potable water supply?
- What is the role of women in water supply projects?
- How is the community organised to operate and maintain the water supply technology?
- Have they been given toolkits for maintenance?
- Are they generally carrying out preventive maintenance?
- Who owns the water supply? And the borehole or well?

**Financing and cost recovery**
- Are there clear cost sharing mechanisms in place?
- What do communities contribute towards cost of water supply and installation?
- Do communities know how much it costs to maintain their water supply source?
- Are they regularly collecting money for routine maintenance?
- Can communities afford the full cost of maintenance?
- Who pays for the cost of major repairs (e.g. dropped pipes, new rising main)?

**Natural environment**
- What is the most significant aquifer in the region?
- Typical depth of borehole or well?
- Who does the exploration and siting for boreholes? With what equipment?
- What is the success rate of drilling?
- Is there a problem with boreholes drying up during the dry season?
- Is chemical composition of groundwater tested during drilling? Subsequently?
- Is bacteriological quality of water tested or monitored?

**Project process**
- Are water supply activities based on data about coverage or scarcity?
- Is there a mechanism for communities to apply for a source?
- What’s the criteria for deploying different technologies to communities?
- Is a Memorandum of Understanding signed?
- What is the planning and implementation process for project installation?
- Who is responsible for quality control during construction?
- Is there a formal handover of the water supply project?
- What is done to monitor performance of water supply technologies once installed?

**Key linkages (training, IEC, supply chains)**
- What training is provided to communities?
- How is training phased or linked with implementation?
- How are participants for training selected?
- Is implementation of water supply linked to hygiene education?
- How do communities communicate with local government and vice versa?
- Is there a supply chain for spare parts? Could it be improved?
2.2.3 Checklist C: Community organisations and primary stakeholders

Institutional arrangements
- Is there a formal organisation responsible for managing the water supply?
- Who is on this committee or organisation (gender)?
- Are roles and responsibilities of organisation members clearly defined?
- What constraints are there to fulfilling roles?
- Does everyone trust the organisation?
- How much contact does the village have with the local water supply department?
- What is the role of the community in water supply maintenance?
- Are there private people in village or locality who can work with the water technology in place?

Water supply technology issues
- How many handpumps are in the village? Eg. Construct the question to be relevant for the type of technology deployed in other villages, it could be solar powered boreholes etc.
- How many are functioning at present?
- Are breakdowns frequent?
- What are the common problems with the technology in question?
- Do they have access to spare parts locally?
- Can they afford to buy them?
- What do they do when the technology breaks down?

Community and social issues
- Who owns the water supply? And the borehole or well?
- Are all water supply technologies used equally or are some more popular? Why?
- What other sources are there in or around the village? Are these used?
- What is the borehole water used for?
- What is the role of women in relation to the water supply technology?
- How is the community organised to operate and maintain the water supply?
- Have they established any rules with regard to the water supply?
- Have they got a toolkit for maintenance?
- Are they doing preventive maintenance? (specify what and when)
- Are they satisfied with the water supply technology? Why?

Financing and cost recovery
- Did they contribute towards cost of water supply and installation?
- Do communities know how much it costs to maintain the water supply?
- Are they regularly collecting money for routine maintenance? How?
- How much money do they have at present?
- How much have they spent on maintenance in the past year?
- Who would pay a major repair (e.g. dropped pipes, new rising main)?
- Do they consider they can afford to maintain the water supply technology?

Natural environment
- How is the taste of the water? Is it acceptable for drinking?
- Is it acceptable for washing clothes (no discolouration)?
- Does the quality vary at different times of the year?
- Is the quantity of water adequate (how many litres constitute adequate) for everyone or is it rationed?
- Does the quantity available vary at different times of the year?
- Is the water supply used all year round? If not, why not?

Project process
- When did the community first get involved in the provision of the water supply?
- Were they clear about what their responsibilities were throughout the project?
- Did they sign a Memorandum of Understanding?
- To what extent did they participate during installation?
- Are they happy with the quality of the work done?
- Was there a formal handover of the water supply technology?
- Does the community monitor performance of the water supply?
- Do they report back to local government on performance?

Key linkages (training, information, education and communication [IEC], supply chains)
- What training did they receive in relation to the water supply technology?
- When was this training received (before or after installation)?
- How were participants for training selected?
- Are they confident with the skills they gained from training?
- Have they had any training on hygiene education?
- How do communities communicate with local government and vice versa?
- Are there regular visits from extension staff?
- Are there local businesses that would be interested in supplying parts?
2.2.4 Checklist D:
Private sector stakeholders

Private water supply mechanics
☐ Where and when did they receive training?
☐ How were they selected to be trained?
☐ What did the training comprise?
☐ How long have they been working as water supply mechanics?
☐ How many pumps (relevant technology) do they work on now?
☐ Who pays them for work? How much?
☐ Where do they get spare parts from?
☐ Can they carry out all repairs?
  What do they do if it is beyond their capacity?
☐ Do they have other employment?

Spare part suppliers
☐ Which models of pump (relevant technology) do they stock (or hold parts for)?
☐ How long have they been stocking pumps/parts?
☐ How did they initially go into business (e.g. with support from project)?
☐ Is the business now making a profit without external support or subsidy?
☐ Do they supply the full range of parts?
☐ Where do they purchase these items?
☐ Who are normally their customers for pumps (relevant technology)/parts?
☐ How could business be improved?

Water vendors
☐ How long have they been vending water?
☐ How much do they charge for water?
☐ What type of people are their typical customers (trade, private, farmers)?
☐ Do they pay towards maintenance?
☐ What would they do, or do they do, when the water supply breaks down?
2.3 Calculations for Venture Africa project in Kechene, Ethiopia

Number of beneficiaries from water facilities

<table>
<thead>
<tr>
<th>Site**</th>
<th>Completion as of 01 Nov 07</th>
<th>Households*</th>
<th>Number of beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTP-1</td>
<td>95 per cent</td>
<td>440</td>
<td>2,200</td>
</tr>
<tr>
<td>ASTP-2</td>
<td>85 per cent</td>
<td>300</td>
<td>1,500</td>
</tr>
<tr>
<td>ASTP-3</td>
<td>80 per cent</td>
<td>252</td>
<td>1,260</td>
</tr>
<tr>
<td>ASTP-4</td>
<td>12 per cent</td>
<td>322</td>
<td>1,610</td>
</tr>
<tr>
<td>ASTP-5</td>
<td>15 per cent</td>
<td>490</td>
<td>2,450</td>
</tr>
<tr>
<td>ASTP-6</td>
<td>5 per cent</td>
<td>502</td>
<td>2,510</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>2,306</td>
<td>11,530</td>
</tr>
</tbody>
</table>

* Average household size taken as five ** Site names were provided by AMREF

2.4 Calculations for Guinness Nigeria plc projects implemented before the 1 Million Challenge

Cost and average population growth of 2.4 per cent in relation to the original project:

<table>
<thead>
<tr>
<th>Water of Life, Osisioma, Abia</th>
<th>Water of Life, Badia, Lagos</th>
<th>Water of Life, Oregbeni, Benin</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gov area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Original no. of beneficiaries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year of completion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population growth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per cent of beneficiaries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Original cost (NGN)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance F06 (NGN)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance F07 (NGN)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance total (NGN)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Est. maint. total (NGN)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per cent of cost</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Million Challenge</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 3 – Project, technology and partner overview

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3.3 Additional information on specific projects 127

3.3.1 Analysis of Water of Life project in northern Nigeria, (Kaduna and Katsina State) using London Benchmarking Group (LBG) model 127

3.3.2 Ghana water filter projects table of beneficiaries 128

3.3.3 Projects not validated 128

Appendix 4 – Other reporting standards 129

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## 3.1 Overview of validated technologies

<table>
<thead>
<tr>
<th>Technology</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Borehole construction</strong></td>
<td>Borehole technology firstly involves the geological surveying of an area for groundwater. If available, water is then reached by drilling a borehole between 30-120m deep. The borehole is then fitted with a plastic or metal casing to prevent contamination. Following a measurement of the average yield of the borehole, a pump is fitted at ground level powered either by a diesel generator or connected to the power grid. The water is pumped into an elevated tank (to create water pressure) and distributed to several fetching points across the community through pipes. Borehole construction projects focus on accessing water resources but they also include distribution systems (see below for more detail).</td>
</tr>
<tr>
<td><strong>Borehole rehabilitation</strong></td>
<td>Borehole rehabilitation projects repair existing borehole technology such as generators and tanks. In some cases, existing boreholes are re-drilled to tap into the groundwater again. Borehole rehabilitation projects focus on accessing water resources but they also include distribution systems (see below for more detail).</td>
</tr>
<tr>
<td><strong>Water filters</strong></td>
<td>The water filter projects in Ghana involve the production of a locally-produced ceramic filter for individual household use. The filter lasts about three years before it needs replacing as long as it is regularly cleaned and maintained. The filter is made in Ghana by Ceramica Tamakloe using Ghanaian clay in a Ghanaian factory. EnterpriseWorks, in collaboration with VITA, then distributes filters through established retail systems as well as donating them directly to schools and health centres. EnterpriseWorks helps to support the distribution network with educational advertising. Overall, the projects not only provide clean water leading to improved health, but also stimulate employment in the factory and entrepreneurship down the supply and retail chain.</td>
</tr>
<tr>
<td><strong>Combo</strong></td>
<td>Combination projects take a holistic approach and use a variety of technologies, such as boreholes with hand pumps, rainwater harvesting, sanitation and hygiene facilities and protected wells. Protected wells are traditional methods used to collect surface water that flows 1-2 metres under the surface. Opposed to traditional methods, these wells are protected and covered by concrete casing to avoid pollution from external sources.</td>
</tr>
<tr>
<td><strong>Rainwater harvesting</strong></td>
<td>Rainwater harvesting projects involve the construction of concrete rainwater tanks for rural households. The project includes the cost for roofing, a gutter and the tank itself. Each tank is fitted with a tap at the bottom to allow easy access for water use. The tanks are also fitted with an overflow compartment for periods with excess rain.</td>
</tr>
<tr>
<td><strong>Environmental conservation</strong></td>
<td>Environmental conservation projects prioritise conservation of natural water systems before utilising them for human consumption and use. For example, small stone and earth dams can be used to increase the level of groundwater in certain areas which suffer from water leaching. These types of projects also took into consideration the rate of extraction each technology employs, so that it is in line with the amount of water resources available.</td>
</tr>
<tr>
<td><strong>Distribution systems</strong></td>
<td>Distribution system projects relate to projects that focus on how the water will be distributed to the communities. Some distribution systems include hand pumps. A manual hand-pump is fitted on the borehole to provide the users with a steady supply of water at low maintenance costs. Other distribution systems include water tanks. The purpose of water tanks is to secure a steady supply of water where supply from the water mains exists but is too erratic to ensure a continuous supply. The water tanks are filled when water supply is available and can provide beneficiaries with water for up to two weeks. Other distribution systems include the placing of pipes and taps (or fetching points) from water resources to communities.</td>
</tr>
</tbody>
</table>

*Note: Some projects will use a combination of technologies during different phases of project implementation. These categories are not mutually exclusive, and are only categorisations of Diageo’s Water of Life projects in this report, not water and sanitation projects as a whole.*
### 3.2 List of Water of Life partners

<table>
<thead>
<tr>
<th>Project</th>
<th>Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Kenya</strong></td>
<td></td>
</tr>
<tr>
<td>Borehole Nzueni</td>
<td>AMREF</td>
</tr>
<tr>
<td>Hand pumps Kisumu, Nyatigo</td>
<td>UNEP</td>
</tr>
<tr>
<td>Water tanks, Gatanga</td>
<td>CDF</td>
</tr>
<tr>
<td>Water tanks, Nyanza</td>
<td>Rongo CDF</td>
</tr>
<tr>
<td>Borehole rehab Kajiado</td>
<td>AMREF</td>
</tr>
<tr>
<td>Borehole Karaba</td>
<td>Diocese of Embu</td>
</tr>
<tr>
<td>Borehole Nyandarua</td>
<td>GPS Drilling/Davis &amp; Shirtliff</td>
</tr>
<tr>
<td>Borehole Ranen, Nyanza</td>
<td>Ranen Community/Rongo CDF</td>
</tr>
<tr>
<td>Borehole Tongaren</td>
<td>Geo Science Products</td>
</tr>
</tbody>
</table>

| **Uganda** | |
| Borehole Ekintangala Fish Farm | Habitat for Humanity |
| Rainwater Harvesting Kapchorwa | ACCORD |
| Rainwater Harvesting Kabale | TWAN |
| Rainwater Harvesting Centre | Kigezi Diocese Water & Sanitation Programme, Church of Uganda |

| **Venture Africa** | |
| Water and sanitation, Bogodogo, Burkina Faso | WaterAid |
| Water and sanitation, Ethiopia, Kechene, Addis Ababa | AMREF |
| Purification tablets, floods recovery area, Ethiopia | AMREF |
| Filters - Brian Voakes | EnterpriseWorks |
| Water and sanitation, Mkuranga, Tanzania | AMREF |

| **Cameroon** | |
| Water conservation project, Soulede village | CRADEC |
| Water distribution system, Bomono village | CRADEC |
| Water systems rehabilitation, Nkolbikon I Bertoua East | CRADEC |

| **Nigeria** | |
| Borehole Rivers State | Finning Limited |
| Borehole Mbaise, Imo | Finning Limited |
| Hand Pumps Epe, Lagos | EnterpriseWorks |
| Borehole Nassarawa | Ralob & Company LTD |
| Borehole Niger State | New Millennium Developers Limited |
| Borehole Badia, Lagos | Seg Malisen Limited |
| Borehole Ossioma, Aba | WaterAid/Guinness Nigeria plc |
| Borehole Benin | Guinness Nigeria engineering team |
| Borehole/tank, Lagos | Puzmax International Limited |
| Borehole Benin Brewery | Guinness Nigeria engineering team |
| Borehole Ajegunle, Lagos | Finning Limited |

| **Ghana** | |
| Filters - Diageo Foundation | EnterpriseWorks |
| Filters - GGBL | EnterpriseWorks |
| Filters - African leadership conference | EnterpriseWorks |
| Boreholes Kwaabre District/Asante | Rural Empowerment and Development Agency |
| Purification tablets Ghana | Community Water Sanitation Agency |
| Boreholes Northern Ghana and Adasawase | EnterpriseWorks |
3.3 Additional information on specific projects

3.3.1 Analysis of Water of Life project in Northern Nigeria, Kaduna and Katsina States using London Benchmarking Group (LBG) model

Motivation
Social investment
Water of Life Irrigation Project in northern Nigeria.

Since January 2005, Guinness Nigeria plc has been introducing and disseminating low-cost, high capacity locally-produced human powered treadle pumps and installing hand-drilled tubewells. This enables farmers to better irrigate their farm lands, thereby increasing their yields and income.

Inputs
Funding
US$185,750 from Guinness Nigeria plc.

Leverage
A US$30,000 grant from another charitable organisation enabled EnterpriseWorks to extend the pilot irrigation project initially funded by Guinness Nigeria plc for another irrigation season.

Outputs
Community benefits
Farmers in Northern Nigeria typically farm on small plots of land that need to be irrigated using labour intensive methods.

The introduction of the human treadle pump in a pilot project funded by Guinness Nigeria plc has acted as a catalyst by demonstrating the feasibility of the pump in the region and showing its financial viability, training local metalworkers to manufacture and market the pump and helping local vegetable farmers to increase their income and standards of living.

In an extension to the project, there are plans to introduce the farmers to sorghum and maize cultivation. These grains could be supplied to the Guinness Nigeria plc breweries, providing the farmers with an additional source of income.

Business benefits
Local government authorities, local communities and IFAD (the International Fund for Agricultural Development) have acknowledged the impact of the project.

Each pump will last for six years and can deliver irrigation water seven times faster than a shadoof – the counter-balanced bucket on a rope traditionally used by farmers in the region.

271 pumps x US$490 per year = US$796,740 increased income. This represents a 4.29 times return on the initial investment of US$185,750 from Guinness Nigeria plc.

Now that the business has been established, many more pumps will be sold.
3.3.2 Ghana water filter projects table of beneficiaries

EnterpriseWorks - Diageo/Guinness Ghana Breweries Ltd. water filter project

<table>
<thead>
<tr>
<th></th>
<th>Diageo Foundation</th>
<th>GGBL</th>
<th>Diageo Africa leadership conference</th>
<th>Brian Voakes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding amount</td>
<td>£75,000</td>
<td>£30,000</td>
<td>£30,165</td>
<td>£7,500</td>
<td>£142,665</td>
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<td>No of free filters</td>
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<td>Average benefit/filter (free)</td>
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<td>15</td>
<td>15</td>
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<tr>
<td>No of subsidised filters</td>
<td>4,600</td>
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<td>-</td>
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<td>Average benefit/filter (subsidised)</td>
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<td>-</td>
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<td>-</td>
<td>-</td>
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<tr>
<td>No of filters for schools</td>
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<td>-</td>
<td>1,992</td>
<td>1,000</td>
<td>2,992</td>
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<tr>
<td>Average benefit/filter (schools)</td>
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<td>15</td>
<td>-</td>
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<td>No of filters for hospitals</td>
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<td>-</td>
<td>8</td>
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<tr>
<td>Average benefit/filter (hosp.)</td>
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<td>-</td>
<td>15</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Actual no of benef.</td>
<td>32,200</td>
<td>30,000</td>
<td>30,000</td>
<td>15,000</td>
<td>107,200</td>
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<tr>
<td>Cost/ benef.</td>
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<td>£1.00</td>
<td>£1.01</td>
<td>£0.50</td>
<td>£1.33</td>
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<td>Original benef.</td>
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<td>30,000</td>
<td>20,000</td>
<td>5,000</td>
<td>105,000</td>
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<tr>
<td>Per cent benef. achieved</td>
<td>64 per cent</td>
<td>64 per cent</td>
<td>150 per cent</td>
<td>300 per cent</td>
<td>102 per cent</td>
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</table>

3.3.3 Projects not validated

<table>
<thead>
<tr>
<th>Market</th>
<th>Project</th>
<th>Beneficiaries</th>
<th>Reason</th>
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</thead>
<tbody>
<tr>
<td>Venture</td>
<td>AMREF Ethiopia – floods</td>
<td>10,000</td>
<td>Emergency relief project in disaster zone</td>
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<tr>
<td>Cameroon</td>
<td>Bertoua East</td>
<td>4,000</td>
<td>Requires extensive travel</td>
</tr>
<tr>
<td>Nigeria</td>
<td>Borehole Rivers State</td>
<td>100,000</td>
<td>Conflict area</td>
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<tr>
<td>Nigeria</td>
<td>Benin Brewery</td>
<td>5,000</td>
<td>Project not started at time of visit</td>
</tr>
<tr>
<td>Nigeria</td>
<td>Borehole Ajegunle, Lagos</td>
<td>100,000</td>
<td>Project completed in November 2007, after validation visit</td>
</tr>
<tr>
<td>Ghana</td>
<td>Boreholes, Kwabre District</td>
<td>27,000</td>
<td>Domestic flight cancelled by airline, NGO not available for travel by road</td>
</tr>
<tr>
<td>Ghana</td>
<td>Purification tablets</td>
<td>30,960</td>
<td>Emergency response project, Meeting with NGO partner not facilitated</td>
</tr>
<tr>
<td>Ghana</td>
<td>Boreholes, Northern Ghana and Adisaswase</td>
<td>32,500</td>
<td>Long travel distance, project to be completed in early 2008</td>
</tr>
</tbody>
</table>
Appendix 4 – Other reporting standards

Meeting the MDG drinking water and sanitation target: The urban and rural challenge of the decade.
Joint Monitoring Programme for Water Supply and Sanitation. WHO/UNICEF.
http://www.wssinfo.org/pdf/JMP_06.pdf

Human Development Report 2006 – Beyond scarcity: Power, poverty and the global water crisis. UNDP.

http://www.irc.nl/redir/content/download/12311/176556/file/Monitoring_MDGs.pdf

Ensuring Sustained Beneficial Outcomes for Water and Sanitation Programmes in the Developing World.
http://www.irc.nl/redir/content/download/23458/267858/file/OP40-E.pdf

Action Monitoring for Effectiveness.
Kathleen Shordt. IRC International Water and Sanitation Centre.
http://www.irc.nl/page/1895

Getting Africa On Track To Meet MDGs in Water and Sanitation: Water and Sanitation Programme.
Appendix 5 – List of references

**EnterpriseWorks (2007)**
‘Pilot marketing and promotion of water filters for household use’, internal document.


*Global Economic Outlook 2000*, UNEP, London: Earthscan

**UNSGAB Water and Sanitation (2007)**

**UN-Water/Africa (2006)**

**UN-Water and FAO (2007)**
*Coping with Water Scarcity: Challenge of the Twenty-First Century*, www.worldwaterday07.org

**WHO/UNICEF (2006)**
*Meeting the MDG Water and Sanitation Target: The Urban and Rural Challenge of the Decade*, Switzerland: WHO Press