

SWAROVSKI
WATERSCHOOL

Water Schools

Sustainable Water Management for People and Nature
around Bwindi Impenetrable National Park



Water for Life

Introduction by Charity Bwiza

Water is the most important natural resource for human health and development and since there are no alternatives to water, it is of critical importance to protect and sustain the existing water ecosystems. By providing clean and safe water to local communities and by creating awareness on sustainable water use and responsible water consumption, the Water School Project supports conservation of valuable natural resources as well as it contributes to increased human wellbeing and social and economic development for the benefit of both people and nature.

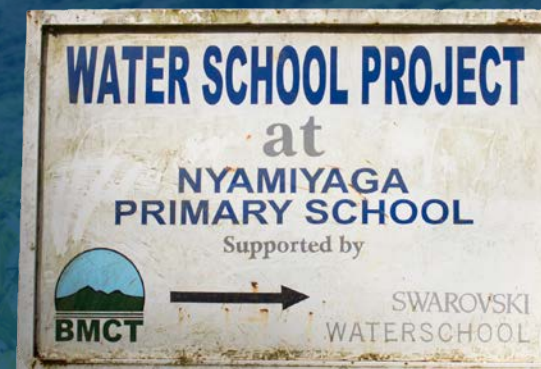
Under the Water School Project pupils and local populations in Kanungu District have been enabled to address ecological, economic, social, and cultural issues in relation to improved water access and management as well as health promoting sanitation and hygiene. Throughout the project children have

been the focal point. Because children are powerful agents of social change and because they are highly adaptable to new ideas, the project has applied pupils and students in primary and secondary schools as the main drivers of change. The children have been encouraged to utilise their creativity and powers of persuasion in a concentrated and directed way, which has proved to be highly effective. This is evident in and around the Water Schools where there has been a visible change in water, sanitation and hygiene practices followed by great improvements in health, personal appearances and local production levels.

The Water School Project in Uganda is implemented by the Bwindi Mgahinga Conservation Trust (BMCT), established in 1994 to provide long-term reliable support for projects promoting research on conservation of biological diversity and sustainable use of natural resources in the Mgahinga Gorilla National Park (MGNP) and Bwindi Impenetrable National Park (BINP) while at the same time promoting the welfare of neighbouring communities.

This booklet is about the experiences and lessons learned during the Water School Project in Uganda.

Charity Bwiza
Programme Manager, BMCT



Thanks to Charity Bwiza and Moses Turyamureeba
Photos Kristina Just
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The Water School Project

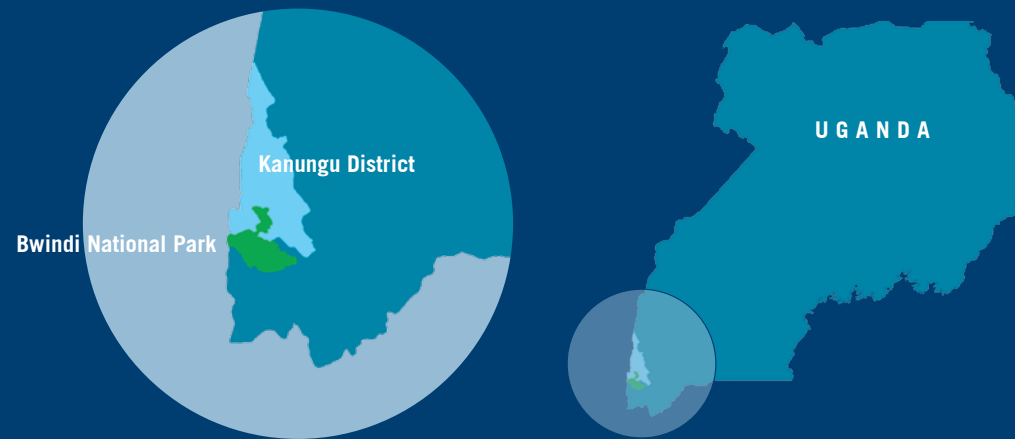
In Uganda

Goal:

Conservation of Bwindi Impenetrable National Park watershed through effective community participation in sustainable water use and management.

Purpose:

Improved sustainable water use and management in 20 schools and 2,000 households adjacent to Bwindi Impenetrable National Park in Kanungu District



Access to water

Clean water is a basic human right. Therefore, access to safe water is a step towards an improved living standard and a better life. Water-poor communities are typically economically poorer compared to those with reliable access to clean water. Each day, economic and social development opportunities are lost to the negative effects of water-borne illnesses and to the time-consuming process of collecting water where it is not readily available. Particularly children and women bear the brunt of these burdens as they are responsible for providing water in most households. They spend numerous hours fetching water from sources often situated far from their homes. Time that could have been far better spent on productive activities and education.

To address these issues, the Water School Project constructed the Banyara Gravity Flow Scheme. Designed and constructed by Ugandan engineers, the water scheme provides safe and clean water for almost 20,000 people in Kanungo District. The source is located in the mountains allowing gravity to create sufficient pressure to transmit water through the 42.8 kilometre pipeline

system, which includes four reservoir tanks (of capacities; 150m³, 100m³, 50m³ and 30m³), five break pressure tanks, 53 tapstands and one protected spring. At schools located where the Banyara Gravity Flow Scheme has not been able to reach, 30m³ or 20m³ rain water harvesting tanks have been constructed to provide water for learners and teachers.

The provision of accessible clean and safe water has reduced the distance to water points from two to four kilometres to less than 500 metres, resulting in a great reduction in time and energy consumption. The extra time is spent on extended agricultural production which has increased food security and stimulated local development. People living in the area have taken up new water dependent livelihoods like vegetable growing and brick-making and local enterprises like the tea factories have been able to produce more since sufficient water supply is no longer a challenge. The water scheme has also reduced the pressure on the Bwindi Impenetrable National Park because fewer people enter the park to collect water.

“The Water School Project has really helped us; it has improved the life of pupils and teachers who never had water for drinking and cleaning available at schools before as well as the many community members who also have benefited from the Banyara Gravity Flow Scheme. Besides providing readily available water, the Water School Project has raised awareness of the importance of safe sanitation and good hygiene practices and many people have changed their behaviour because of that. Due to our restricted budget, the district cannot handle service provision alone so we are grateful for the many improvements in Kanungo district. The project has now been handed over to us and the water user committees and we will continue to monitor the water boiler facilities and the rainwater harvesting tanks at the Water Schools.”

*Ambrose Byaruhunga,
Assistant District Water Officer, Kanungo District*

Water User Committees (WUC)

To ensure proper operation and maintenance of the new water sources, 410 water user committees have been trained in daily scheme management, a scheme operator has been hired and a sub-county water board has been formed to oversee and guide the management.

“The water user committee oversee the day-to-day operation and maintenance of the water point. We sensitise the community on good water behaviour and we tell children not to play with the tap or the water as it is a valuable resource. We are also responsible for collecting water user fees; each household

pays Ush 1,200 (USD 0.5) per month. Four times a year, we organise meetings for the water users to discuss the use of the collected money and to deliver a financial report for the past quarter. It is important for the community members to know that their money is put into good use and the financial reporting promotes transparency and accountability. We have lived so many years in this area without water so even though some families struggle to make the payment, they do understand that they have to pay for the service.”

*Jane
Water User Committee member*

Empowering women: Throughout the Water School Project, BMCT have actively integrated women in local water and hygiene management and more than 50% of the Water User Committee members are women. BMCT also seeks to improve the domestic gender balance by encouraging husbands and wives to work together as a team.



Safe drinking water in schools

"The water boiler has really helped us to reduce sickness among students and teachers at the school. Before, we only had capacity to boil small amounts of water so the children and adults sometimes had to consume unsafe water but now there is enough clean water for everybody. We boil every second day and to avoid germs and dirt, we clean the tank regularly and we make sure that cups and containers are kept clean at all times.

Our students and employees know the importance of boiled water because they can actually feel the difference; they do not fall sick because of contaminated water. What a relief!"

*David R. Rugooti
Assistant Headteacher at Keita Primary School*

Clean drinking water

Every day, in rural areas like Kanungu, contaminated water causes health annoyances and severe illnesses, like permanent diarrhoea, dysentery, and typhoid. The high frequency of discomfort and illness not only kills children and adults but it also negatively impacts social and economic development. Local education levels remain low when sick children miss school and economic opportunities are lost because people are either too weak to take advantage of the chances or too busy taking care of ill relatives. Likewise, many families experience recurring economic setbacks as they are forced to sell productive assets such as livestock to pay their medical bills.

As a part of the Water School Project's effort to improve the health and wellbeing of children and adults in the targeted areas, large water boilers has been installed at ~~XX~~ schools and communities have been sensitised on the importance of preparing and storing ~~clean~~ clean water for drinking. As a result, there has been a noticeable reduction of water bourne diseases in the area and many people report that they have taken up new livelihoods such as coffee and vegetable production because of the improved well-being and the time released from walking long distances to collect water.

"The Banyara Gravity Flow Scheme has changed our life. With an easy access to safe water, we can work in the garden until late and still have time to fetch water and cook. We have water in the dry season which means that we can grow vegetables for consumption and to sell at the market for a profit. But most importantly, we feel much better; cases of sickness have reduced considerably; our houses and our clothes are clean; and we bathe every day. A life without water is a life without dignity."

"The water we used to drink had a foul smell and it felt sticky in the mouth. It was bad, but we lived with it because we did not have any other alternatives. I was so happy when the new water scheme was installed; the water is clear and it has no taste. My children who are pupils at one of the water schools have taught me to always boil the water before we drink it. In fact, they actually refuse to drink unboiled water after learning about the spread of water bourne diseases at school. Through community meetings, I have gained new knowledge on how to store the boiled water in clean lidded containers and how to serve it without contaminating it.

Of course it is more work compared to before. But if you think about how much time I save by not walking a long distance to fetch water and not constantly going to the health centre with my children to get treatment for infections and diarrhoea, I actually have much more time now compared to before. Also, I save a lot of money on medical bills which in the past could often leave me sleepless at night because I worried about how to pay them."

*Hope Baribonakyi
Community member*



Water, Sanitation and Hygiene

Clean water, access to sanitation facilities and good hygiene is vital for health, for social and economic development and for conservation of natural resources. Because healthy children attend school more and get more out of it, the Water School Project has installed sanitation facilities and promoted good hygiene practices to attract and retain students and to improve the learning environment at all water schools.

BMCT knows that merely providing water and constructing latrine facilities do not result in improved sanitation and hygiene. Therefore, as a new approach BMCT has introduced Community-led Total Sanitation (CLTS)/School Led Total Sanitation (SLTS), which is a sustainable low-cost high-impact intervention targeting multiple sanitation behaviours at once through community/school level change.

“CLTS and SLTS are widely used approaches for the promotion of sanitation intended to eradicate open defecation and improve communities’ and schools’ health and wellbeing. Open defecation poses an enormous threat to health and it is the root cause of faecal-oral transmission of disease.

Through CLTS and SLTS, pupils and community members map their schools’ and villages’ contamination routes, and they analyse their hygiene behaviours and plan how to block the contamination. We have experienced very positive results using this method and XX schools and X villages are now declared Open Defecation Free (ODF).”

*Charity
Programme Manager, BMCT*



Clean hands is the first step to a better health. To improve daily hygiene practices, the Water School Project has encouraged installation of tippy-taps. A tippy-tap is a low-cost hand washing facility that can easily be constructed of available local materials. It works by lightly stepping on the stick that is attached to the water dispenser to make the water pour out.

Water, Sanitation and Hygiene (WASH) Clubs

Hygiene and sanitation remains a critical issue at most schools in Uganda where many sanitation facilities basically are unfit for use. Lack of doors and private spaces and ramshackle constructions in danger of collapse are among the contributing factors for discomfort and poor learning environments. Throughout the project, all water schools have carried out conservation, water and health educational programmes. By forming school Water, Sanitation and Hygiene (WASH) Clubs, knowledge on sustainable water management and improved sanitation and hygiene practices in school and at home is spread from within the school by the members who raise awareness among the other learners and their parents.

“The children really understand the messages; their parents inform us how they have changed their behaviour at home and how they have taught the rest of the household to boil water and improve hygiene and sanitation. This has really been an eye opener for many families that never knew the importance of hygiene before.”

*Florence Kesiime,
WASH Club matron*

“The school looks much better now compared to before; there are no trash lying around. Sanitation is a big issue around here. The latrines did not work; they were old and many of the doors were missing so we often had to queue in front of the few stances that could still be used. The boys had to bathe with the girls. Also the teachers used only one stance and had limited privacy. Before, there were no water supply at the school so we did not have water available for drinking, cooking and cleaning. Now, we have water and bathing shelters. We have enough water to drink; we bathe every day; we clean our teeth; cut our fingernails, and comb and trim our hair.

We have all told our parents about the new practices. Most families around the school have tippy-taps, compost pits, drying racks, and latrines. People clean their houses and compounds, they boil the water before drinking it and they use clean closed containers for storage.”

*Brenda and Eunice,
WASH Club members at Rubimbwa Primary School*



Creating awareness

Wash Club members and learners from the Water Schools have been educated in creating awareness and promoting behaviour change within their communities through influencing their parents to adopt improved attitudes, behaviours and practices at household level.

Among the many initiatives to promote awareness such as community dialogue meetings, radio talk shows, still photograph projections, etc., pupils, teachers and local people have been trained in writing and acting. Educative drama performances is a very effective way to disseminate information and cause awareness. Through drama, music, dance and poetry, pupils and community members gain new knowledge and they are shown how to replicate the new practices at home. The plays cover various topics such as conservation-friendly water practises, and instalment of domestic hygiene and sanitation facilities to improve health and personal hygiene. After the performances, the pupils and the community members discuss the themes of the play, and they use their new knowledge to identify and solve current issues. At schools, drama competitions have been held

to motivate and encourage the children to enhance the quality of the plays and further emphasise the messages.

By raising awareness in schools and communities about the relation between hygiene and health, the Water School Project has motivated pupils, teachers and community members to significantly improve hygiene practices and to install sanitation facilities at home. A majority of the participating households have installed latrines, hand-washing facilities, bathing shelters, rubbish-bins, compost-pits, as well as water boiling and safe water storage. As a result, sanitation and hygiene standards have greatly improved in schools and households in the area.

To consolidate the results of the WASH Clubs and to further improve the pupils and students learning environments, BMCT has installed solar power panels at suitable schools. The electricity is used for illumination of reading rooms and dormitories. Nyamiyaga Secondary School has also received three computers, making computer lessons compulsory for all A-level students at the school. (needs to be updated!)

A model household

"I am proud of my home. I have made the improvements to upgrade our sanitation and hygiene standards. I wanted to have an ideal home so I have made the house nice to live in; it is tidy and well-aired, we have mosquito nets, an energy saving stove (see page 16), a pit-latrine, a bathing shelter, a drying rack, and a tippy-tap.

Because I have access to water, I have been able to smear the house inside and outside as well as the compound. I used to fetch water from a stream quite a distance from here. I was often stressed by the time consumption, especially if I was working the garden until late, then I had to walk directly to the stream. Now, I have more time to grow my vegetables and perform domestic chores. From my two youngest boys who attend one of the water schools, I have learned to wash my hands after visiting the latrine and I have gained knowledge from community meetings and drama performances on how to boil and store water for drinking. The change in our lives is almost unbelievable and I advise everybody to copy the improvements for better health, hygiene and sanitation.

*Peace,
Model household
competition winner*



Minimising the pressure on the natural resources

Visible demarcation of the boundary between the national park and the neighbouring communities do not only build understanding and reduce the conflict between the local population and the protected area but also it significantly reduces the pressure on the natural resources within the park.

"I participated in planting a tree-line along the border of the national park. With a visible border it is easier for us (community members) to recognise and respect the park boundary. I think it is a really good initiative to invite the local communities to participate in demarcating the border. The trees are planted by us on our land and we own them. So when they are mature we get the profit for the timber. It gives us a sense of ownership of and involvement in the national park."

"Through the Water School Project, the Ugandan Wildlife Authority (UWA) has received support in form of tree-seedlings and training to conserving the Bwindi Impenetrable National Park in harmony with the surrounding communities. UWA carries out community and school education programmes on the importance of conservation inside and outside of the park so we have been grateful to be involved in the project and support our common goals."

Raymond Kato

*Ecological Monitoring Warden (UWA)
Bwindi Impenetrable National Park*



Conservation

The way water is used and managed positively or negatively influence the state of natural resources and large ecosystems such as the Bwindi Impenetrable National Park. By creating awareness on the importance of conservation, by providing safe water, and by promoting good sanitation and hygiene practices among the park adjacent communities, the Water School Project has contributed to minimise the pressure on the parks resources.

"The Water School Project has changed a lot around here. Most importantly, people no longer fetch water from the forest and the communities have learned to appreciate and protect the water catchment area within the park. Our main problem is population pressure; due to water scarcity people had access to only a very limited number of water points of which not more than a few could provide safe water. Many children did not attend school because they had to walk long distances to fetch water or because they were sick from drinking unboiled water. Luckily, this has changed. The support we (UWA) have received from the Water School Project have enabled us to better protect the natural resources and to improve our relationship with the neighbouring communities (see page 14)."

Raymond Kato

*Ecological Monitoring Warden,
UWA*



Building community resilience

Climate change severely affects rural families whose livelihood depends on land cultivation or on other natural resources. Extreme weather conditions, changed rainfall patterns and prolonged droughts make it difficult to predict the seasons, resulting in failed harvests and increased food insecurity.

To build community resilience to overcome the negative impacts of climate change, to increase the tree-cover, to promote conservation friendly livelihoods and to ensure that the Water Schools have permanent access to firewood for their water boiling facilities, the project has distributed more than 65,000 tree seedlings to local schools, churches, enterprises and private households.

"The tree coverage increases gradually because more people are planting trees. In the past, there were big forests where people could fetch firewood and other resources. But now these are either gazetted as national parks or they have disappeared completely."

Under the Water School Project, I have received seedlings and training on seed production and marketing. As a result, my income has increased considerably. It feels great to make an income and protect the environment at the same time."

Charles Kiiza

Tree nursery owner



Fuel saving stoves

“A majority of the people in Kanungu district depend on firewood for preparing food and boiling water. Most families still use the heavy firewood consuming traditional three-stone cooking fireplace. But with a fuel saving stove, I use less than half of the firewood I used to. Our traditional fireplace would consume large bundles of firewood within a day but with the fuel saving stove the same amount can last for a week. This has significantly reduced the time the children and I used to spent on fetching firewood.

Because the stove maximises the heat transfer to the pots and pans placed on top of it, the cooking time is much shorter and the outlet on the back of it prevents the kitchen from getting filled with smoke.

Faith - Community member

Enhancing food security

“The school kitchen garden have made our school much more attractive. Both teachers and pupils have been trained by BMCT in preparing land for sowing and growing vegetables. So far, we have planted French and regular beans, cabbage, and green pepper. We are very excited about the project because we get more food to eat and we learn how to care for the garden. One of the most interesting new things to learn has been the production of liquid manure to nurture the plants; it is done by blending high carbohydrate leaves and animal droppings. Participating in making the garden grow has inspired us to share it with our parents. We have taught them how to prepare manure and the importance of weeding to prevent competition among the plants so many of our families now have kitchen gardens at home.”

*Precious and Derek,
Buhoma Community Primary School*





Sustainability

To sustain and strengthen the new safe water and hygiene practices in the communities surrounding the Water Schools, 100 community educators have been trained under the Water School Project. The community educators mobilise the communities in each of their assigned areas to develop and implement local action plans for water conservation, sanitation and hygiene promotion.

Village Savings and Loan Associations (VSLAs) have been formed in all targeted communities under the Water School Project. Besides the many economic and social advantages of the VSLAs, the groups work as an entry point for the community educators to reach the community members. The members meet once a week, which means that they can easily be targeted with new information on conservation friendly safe water and hygiene practices and the like.

The VSLAs have also proven to support timely payment of the water user fees. By collecting the payment at the weekly meetings, families are can pay the monthly fee at 1,200 in four rates at Ush 300 per week which is a much more feasible for most people.

“The VSLA have changed the life for many people. By saving just small amounts every week and take out loans, we can invest in commercial ventures such as livestock rearing and retail shops but as importantly we can also cover our expenses without having to sell productive assets. I have been a member since the beginning of the project and I have taken out several loans to buy goats and piglets for rearing and selling.”

It can be a challenge to mobilise the water user fee. People are poor and although most families understand that they have to pay for the service, it can be difficult for them to make the payment. In the past, we walked from door to door to collect the fee; it was unpleasant and tiresome to walk from house to house but after we connected the payment to the VSLA and divided the payment into four weekly portions most people make the payment on time.”

*Jackson,
VSLA and Water User Committee member
(not pictured)*



The VSLA methodology

A Village Savings and Loan Association (VSLA) is a micro-credit scheme under which 25-30 members meet in a self-managed group once a week to save and borrow money. Members can take out loans to invest in income generating activities such as commercialised farming, goat rearing and small businesses, or they can use the loans to meet expenses like school fees and medical bills. All members pay 10% interest and have three months to repay the loans, resulting in a steady growing pool of money, which is shared among the members once a year. Through the group, VSLA members are provided with security against unforeseen expenses and they are enabled to invest in the future. As a result, VSLA members

experience pronounced economic and social progress leading to an overall increased well-being and enhanced quality of life. The transformational impact of the VSLA methodology has made the initiative immensely popular. Particularly women benefit from the VSLAs; they have proven to be good at financial management by investing wisely in income generating activities and in household improvements resulting in an increasing local economic growth and household welfare. VSLAs promote a saving culture among the members and offer a much needed alternative financial services since banks and micro-finance institutions only are very few in remote and rural areas like Kanungu District.

Water

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BMCT



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