FREE FLOW

REACHING WATER SECURITY THROUGH COOPERATION

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From China to Uganda: educating and empowering people to take action

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In Entebbe, Uganda, it started with one teacher. Fed up with the toll that waterborne diseases were taking on his pupils and the school at large, Lake Victoria Primary School teacher Aggrey Oluka jumped at the chance to participate in the development of water, sanitation and hygiene (WASH) education materials that could improve his students’ health.

At a workshop in Uganda’s second largest city Jinja, Oluka and other educators worked with the Project Water Education for Teachers (WET) Foundation to develop WASH education materials to use across six African countries. While he expected to lend his expertise to creating locally relevant materials that would appeal to students and teachers around Africa, Oluka couldn’t have known the impact his participation would have on his community and the wider world. The successful implementation of the materials he helped create would ultimately lead to safer water resources, increased water source protection and even improvement in Lake Victoria Primary School’s bottom line. The experiences of Oluka and Lake Victoria Primary School show how cooperation on WASH education can lead to significant institutional development — and demonstrate the potential of scaling up water education.

Aggrey Oluka had seen waterborne diseases devastate Lake Victoria Primary School. Enrolment at the 2,000-pupil school plummeted to 400 during one cholera epidemic, and even when cholera was not present, typhoid and other diarrhoeal diseases were. His pupils often missed school or had to leave class to visit the school health clinic when they felt sick. As a science teacher, he knew that waterborne illnesses can often be prevented, but there was no programme in place to teach children — or even train teachers — to protect themselves.

Around the same time, the United States Agency for International Development (USAID) had noticed a similar lack of WASH education resources for Africa. Formal water education was virtually non-existent and the lack of a systematic programme meant that preventable waterborne diseases continued to proliferate unchecked. Measures that can reduce disease transmission — hand washing, boiling water and water
source protection, for example — had not been introduced in a meaningful way.

To address the gap, USAID first considered several existing books on water, sanitation, hygiene and health, but felt that they lacked the necessary relevance to children, teachers and communities in Africa. USAID then decided to work with the Project WET Foundation to develop, publish and distribute a new set of Africa-specific, child-friendly WASH education materials. A US non-profit organization with decades of experience creating resources and training educators to help people of all ages understand complicated water topics, Project WET knew the potential of water education to change lives and build local capacity.

Since 1984, Project WET has dedicated itself to the mission of reaching children, parents, teachers and community members of the world with water education by publishing water resource materials in several languages, providing training workshops, building expert and educator networks and empowering individuals to take meaningful action to address water issues. The cornerstone of Project WET’s methodology is teaching about water resources through hands-on, investigative, easy-to-use activities and empowering change by offering opportunities for participants to effect positive change in communities. The system works because it motivates children and adults alike to learn using Project WET’s interactive, multi-sensory, adaptable, relevant and scientifically-accurate materials.

To kick off the new WASH programme, Project WET planned a week-long workshop in Uganda, along the shores of Lake Victoria. The workshop convened 64 curriculum experts and teachers — including Oluka — from countries throughout East Africa to devise a comprehensive programme for teaching African children about water. Feedback from this workshop assisted in developing and refining the materials for cultural appropriateness, effectiveness and breadth of applicability.

In cooperation with these important local partners, Project WET fleshed out the content for an original educators’ guide and

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**Water education in Latin America**

Building on the success of Project WET interventions in Africa, UN Habitat asked Project WET to create a similar programme using a human values-based approach to water, sanitation and hygiene education (HWWHES) in five countries in Latin America and the Caribbean — Bolivia, Colombia, El Salvador, Mexico and Peru. The materials were customized for local audiences through on-the-ground workshops and translated into different Spanish-language versions. A train-the-trainer model was used to implement the programme, which has reached nearly 3,000 teachers and 100,000 students throughout the five countries.

Evaluation results showed that 93 per cent of teachers surveyed who used the educational materials reported seeing positive changes in student behaviour, including practising better hygiene habits, conserving water, understanding water resources and instilling stronger values such as responsibility, compassion and care for the environment.

Project funding also provided for small demonstration projects to show the potential of using water education to empower meaningful local action. Using a Spanish-language Internet educators’ portal created as part of the project, regional teachers submitted applications to carry out action projects. Two projects were chosen: one in Bolivia and one in El Salvador.

In the Andean Plateau region of Bolivia, Project WET supported the construction of new sanitation facilities for young children in the small city of Patacamaya. Part of a larger hygiene improvement project undertaken by Plan International, the new facilities include separate boys’ and girls’ toilets, as well as new hand-washing stations.

In Apopa, El Salvador, the Santa Carlota 1 School partnered with Adosco and UN Habitat to use the Project WET demonstration funds to construct a new, more sanitary kitchen, pave their schoolyard and install a new water tank. They also upgraded hand-washing facilities and provided drinking water stations for students in their classrooms.

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Images: Project WET Foundation

Using the ‘Incredible Journey’ activity, children at Lake Victoria School learn about the water cycle

A teacher in El Salvador wrote a grant to upgrade these hand-washing facilities to make them more sanitary.
At a workshop in Uganda, teachers find out how to incorporate highly interactive pedagogical methods to teach about water resources.

companion student activity book on water, health, sanitation and disease prevention, as well as water cycle and watershed posters and companion student activity books. The materials would be distributed through a train-the-trainer process, with Project WET working with core groups of local education leaders in Northern Uganda, Rwanda and Tanzania, not only to use the new resources but also to help their fellow teachers implement the programme.

Keenly interested in getting the new resources to his colleagues and to the pupils at Lake Victoria Primary School, Oluka waited for the materials to be finished and implemented them swiftly once he had them in hand. Focusing first on the biggest problem — the unchecked spread of waterborne diseases — Oluka and his fellow teachers worked to improve children’s water use habits, stressing hand washing, water purification and water source protection. According to Oluka, things started to change for the better.

“The efforts of Project WET in my school have been realized from the change of behaviour in the pupils’ use of water, which wasn’t the case previously,” Oluka said. “This has led to the reduction of so many waterborne diseases, especially diarrhoea and typhoid, and it has also changed the hygiene of the pupils and the sanitation of the school.”

With students’ health improving, Oluka felt ready to move beyond the classroom to empower students to make meaningful changes in their school and community. One of the main areas of difficulty was the amount of water available to the school: now that the students knew the importance of hand washing with soap, they needed more safe water with which to do it. Unfortunately, the school’s water bill was already more than US$600 a month, a huge sum in a country where the World Bank estimates the annual per capita gross national income is just US$1,310.

Working with students from his classroom and in after-school clubs, Oluka asked Lake Victoria Primary School leaders if they could set up a rainwater harvesting system using a 10,000-litre water tank that had been left idle. Oluka and his students were granted permission and set up the system with help from the community. The school’s available water increased substantially, even as their water bill dropped dramatically, to around US$30 a month.

And Oluka and his students did not stop there. After learning about the impact of improperly disposed trash on water resources in their Project WET lessons, the students launched a campus-wide clean-up, which led to a paper recycling programme when they noticed that much of what they were collecting was waste paper. They then used the paper to make cardboard pieces from which they could hang teaching materials.

“The impact of this is that there is reduction in compound littering. We are also able to sell some of this cardboard we produce to sustain our project,” Oluka explained.

Increased enrolment (and an increase in the number of teachers), ready access to boiled water for safe consumption, multiple hand-washing stations and higher scores on the Ugandan National Exams are additional positive changes documented at Lake Victoria School through follow-up interviews with students and teachers.

The results have made Aggrey Oluka a strong advocate for water education after seeing its potential to
improve schools and communities. Inspired by his experiences, he has even enrolled in a degree programme in Environment and Natural Resource Management.

After winning a 2010 African Ministers’ Council on Water AfricaSan Award in recognition of his outstanding work at Lake Victoria School and beyond through the scaling up of the WASH programme he helped develop, Oluka said: “I call upon the Government of Uganda and other governments in Africa to also include water education in school curricula at all levels so as to make our pupils have positive behavioural change towards sanitation, hygiene and sustainable usage of water.”

In many ways, his call has been heeded, and not just in Africa where the USAID-Project WET WASH programme has ultimately reached tens of thousands of teachers and millions of students in 21 countries. UN Habitat has sponsored an adaptation of the programme in five Latin American countries, as well as in India, and other partners have extended the scope to include Brazil, Cambodia, Afghanistan and Haiti. The materials are now available in English, French, Spanish, Portuguese, Kiswahili, Kannada (a language of India), Dari and French Creole — and most can be freely downloaded from the Project WET website.

As Oluka sees it, it makes sense to start with children to begin to solve vexing water issues.

“Whenever there is a disaster as a result of water, whether shortage or use of contaminated water, it is mainly the children who suffer the consequences through diseases and even walking long distances looking for water,” he noted. “And children are very excellent in spreading news, even to the adults, about sustainable water usage and control of diseases that are common in our communities.”

Water education in China

Not all of the water education programmes in which Project WET is involved in internationally revolve around water, sanitation and hygiene topics, China is one of several countries in which Project WET has been invited by institutional sponsor Nestlé Waters to share hands-on methods to teach children about water conservation and protection, as well as healthy hydration choices.

In partnership with Nestlé Waters and the Shanghai Ministry of Education, Project WET China launched in January 2010 with 17 Shanghai schools. Project WET materials were translated into Chinese and implemented through a train-the-trainer process, which has included not only Project WET staff but also Nestlé Waters China employees. With a focus on environmental education and various after-school activities, the priority of the programme is to raise local students’ awareness of the importance of environmental protection — a topic of great importance in China.

In China, too, educators and local partners have taken the lessons learned in the classroom outside of the school walls and into the community. On World Water Day 2011, students taking part in Project WET China broke the Guinness World Record for plastic recycling, turning in nearly 8,000 kilograms of plastic bottles in a single day. Subsequent community projects have included a water activity carnival and glass recycling activities.

Shanghai Project WET facilitators have begun training teachers outside of the city to scale up the programme. The programme launched in Beijing in March 2012 and Hunan Province in August 2012, and other NGOs from around China are now joining the effort to bring water education to China.