



SMART WATER FOR GREEN SCHOOLS

Smart Water for Green Schools (SWGS):

- Launched in 2010, provides safe drinking water to over 40,000 people in Ghana and Bolivia
- Expanding in 2012 in Ghana, Bolivia, elsewhere in Africa and Asia
- Empowers communities to secure their water
- Reduces waterborne diseases
- Promotes sustainable use of water resources
- Increases school attendance, girls education and gender equality
- Helps children become agents of change



THE GLOBAL WATER CRISIS

The world is gripped by a major water crisis. Close to 800 million people are living without clean sources of drinking water, over a third of which are in Sub-Saharan Africa, and 2.5 billion have no access to adequate hygiene and sanitation facilities.

Water scarcity in some regions and pollution of the world's watersheds are major concerns. Availability of water and access to sanitation are unequally distributed in many parts of the planet.

The health consequences are stark. Globally, diarrhoea is the leading cause of illness and death, and lack of access to safe, clean drinking water and basic sanitation, as well as poor hygiene cause nearly 90% of all diarrhoeal deaths.



Children washing and collecting water from a stream at Asukwakwa in Ghana's Volta Region

WHERE WE WORK

In the African nation of Ghana and South American country of Bolivia, many communities have no secured access to clean water.

In **Ghana**, 40% of people living in rural areas do not have safe water to drink. The country's main water supply sources are surface water bodies and groundwater. Water availability, however, is unpredictable and water tables increasingly suffer from pollution. School children often walk long distances to fetch water from unsafe sources, like streams and rivers that are also used for washing and watering holes for livestock.



Herdsmen in Bolivia's Charagua region.

If children drink contaminated water, they can contract waterborne diseases such as bilharzias and diarrhoea. These, along with malaria, are Ghana's leading causes of illness and death. Unsafe water and lack of sanitation lead to life-threatening health problems that also keep children from attending school and strip them of their only chance to escape poverty.

Bolivia has South America's lowest water and sanitation coverage levels, as well as having low quality services.

Other problems it faces are low access to water in rural areas, pollution and reduced quantity of water

due to climate change.¹

WHAT IS SMART WATER FOR GREEN SCHOOLS?

Smart Water for Green Schools (SWGS) is part of Green Cross' Water for Life and Peace Programme. SWGS offers concrete solutions to improving the lives of people affected by "water poverty" through equipping schools with rainwater harvesting systems, providing ecological sanitation facilities and installing other water systems, like wells and boreholes, for the extended community. It is also a practical measure for helping realize the universal Human Right to Water and Sanitation.

¹ http://www.mmaya.gob.bo/documentos/pnsb_final.pdf

THE GREEN CROSS VISION

To respond to the water crisis, Green Cross International (GCI) launched SWGS in February 2010 in Ghana's Volta River basin. The project is implemented by Green Cross Ghana with a local committee in each community running the programme on the ground.

Coordination with local authorities is key to identifying communities most in need and to ensure monitoring and maintenance.

In Bolivia's Plata River Basin, similar initiatives were launched in mid-2011 with Green Cross Bolivia supporting rural communities to run SWGS projects.



A girl in Ghana carries water home.

SWGS provides safe drinking water, sanitation and environmental and health education to children and their local communities in river basins that stretch across boundaries and borders of different communities and countries. SWGS consists of four main components:

- Equipping schools with rainwater harvesting systems;
- Providing ecological sanitation facilities;
- Installing other water systems for the extended community;
- Developing education programmes in schools.

Providing water and sanitation services to schools engages children, their parents and other community members to improve water security and maintain their role as guardians and agents of transformational change.

As of January 2012, SWGS has been rolled out in 22 Ghanaian villages, providing 37,000 people with regular access to safe drinking water. SWGS water services will be installed in around 20 more communities in 2012. In Bolivia, 16 communities and over 6,000 people are benefiting from SWGS, and another 6 communities are scheduled for 2012. Our vision is to deploy SWGS in other river basins and communities around the world.

1. Rainwater harvesting systems

To date, limited attention has been given to optimizing available water resources with "smart" systems. Ghana's Community Water and Sanitation Agency has identified rainwater harvesting as one technology option for urban and rural areas to provide a sustainable water supply.

SWGS builds reliable and long-lasting rainwater harvesting systems and ensures maintenance by training local community engineers.

One example is by constructing basic systems on school building roofs to catch rainwater, which is diverted into an overhead or underground storage tank. School children and community members monitor, treat and use the captured water for drinking and washing hands, stimulating community interest in managing the water systems. Harvested rainwater is a good supplement to other water supplies, thereby relieving pressure on existing sources. It also acts as a buffer supply in times of emergency and can reduce erosion and flooding.



Children drinking from a rainwater tank at a school in Prang, a village in Ghana's Brong-Ahafo region

2. Ecological latrines



A completed ecological latrine at a school in Prang, a village in Ghana's Brong-Ahfo region

SWGS constructs ecological latrines in schools that have no such facilities, and ensures the community is trained in their maintenance. The latrines keep human waste away from the immediate environment, which is collected and treated for agricultural purposes. The system promotes better public health, increased agricultural productivity and reduced wastewater pollution.

Another spinoff from equipping schools with separate male and female toilets is the increased student enrolment. In some schools, enrolment of girls has increased by almost 50%. It has also

helped make schools more attractive for teachers to consider working there.

Ecological latrines play a major role in ensuring education for more children and reducing gender inequalities.

3. Providing more water by building additional water systems

To secure safe water supplies for school children and their communities, SWGS refurbishes existing water systems or equips villages with additional boreholes and wells.

Villages selected for SWGS rely on boreholes and wells for their water supply, or local streams and rivers if no manmade systems are available or when water availability drops during the dry season.

4. Educational programmes

SWGS implements hygiene and sanitation education, and an environmental awareness programme in schools.

This involves training school instructors and other community members, and providing materials and methods to teach children about hygiene, water use and the environment.



School children at Green Cross-supported school in Makango, Ghana

BENEFITS OF SMART WATER FOR GREEN SCHOOLS

Water is a limited resource. It crosses borders and is shared between states and people. Some 40% of the world's population lives close to one of the 276 international watercourses. Today water is increasingly at the centre of tensions and disputes between groups sharing watercourses.

SWGS encourages cross-cultural exchanges between schools benefiting from the projects in the same river basins. Once systems are in place, students learn and practice techniques for rainwater measurement and monitoring of the system and local rivers. This data is then shared with local authorities.

The project allows children, who are typically from farming and fishing communities, to discuss their experiences, and grasp the shared nature of water resources. In this way, children get to know their neighbours, promoting awareness, equity and respect. The goals of our projects are to promote access to water and sanitation, as well as a shared vision of water conservation at local, national and international levels.

LOOKING AHEAD

Green Cross International, working with our local offices in various countries and other partners, is looking to expand the Smart Water for Green Schools project in Ghana, Bolivia and elsewhere in the world.

The successes seen to date in implementing SWGS projects have given us the confidence that this model of providing access to safe drinking water and sanitation can grow further, as well as promote our vision for improved sharing of available water resources between communities and countries.



Bolivians accessing water through Green Cross projects

ABOUT GREEN CROSS INTERNATIONAL

Green Cross International (GCI), founded by Mikhail Gorbachev in 1993, is a leading environmental organisation. GCI is a non-profit and non-governmental organisation that works to address the interconnected global challenges of security, poverty eradication and environmental degradation through a combination of advocacy, campaigns and local projects. GCI is present in over 30 countries and has its headquarters in Geneva, Switzerland.

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