Factsheet n°1:
Towards a common understanding of the Blue School Concept

OBJECTIVES OF A BLUE SCHOOL

The objectives of a blue school are the following:

- Improving the health of children at schools and influence their environment at home. This would be achieved through the reduction of water born diseases and worm infection and a cleaner environment.
- Raising awareness of children, teachers and parents about environmental and health issues related to water, sanitation, hygiene and nutrition through improving the teaching methods at schools, including the establishment of demonstrations and the link with the community level.
- Related goals are to protect the dignity of children, the effective learning of children, the enrolment and retention of children (especially girls) and to some extent a better diversified nutrition.

THE COMPONENTS OF A BLUE SCHOOL

A blue school consists in the following components:

- ✓ Sustainable access to safe drinking water,
- ✓ Sustainable access to sanitation and hygiene,
- ✓ A school garden as practical place to show relationships between food production and an efficient management of water,
- ✓ A demonstrative place for watershed and land management practices, wherever it is suitable (depending on the surrounding of the schools).

These components (the 4th one could be optional) represent the minimum standards to gain the label "blue school". However depending on the context, additional components can be developed such as the choice of ecosan technologies and the use of by-products in the garden, solid waste management-composting, solar energy, disaster risk reduction.. All components should be implemented in parallel. It's also possible to intervene in a school where one component is already covered (for instance access to water) but not the others.

The basic concept is simple and actually not new: it is the synthesis of good practices developed by SDC throughout the years, practices currently being up-scaled worldwide.

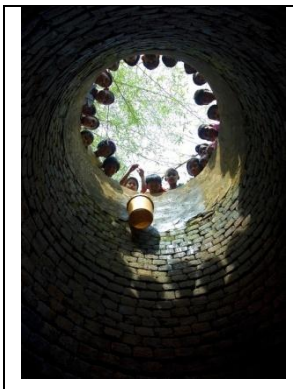
HOW TO GET STARTED?

When willing to implement blue schools, steps to go further are the following:

- First step is an assessment of the existing policies and strategies regarding education and the concepts yet implemented by the government or by international institutions (UNICEF by instance). Part of the assessment is as well to identify what is already tackled in the national curriculum regarding water cycle, agronomics/irrigation/watershed management in order to possibly add missing modules in the curriculum.
- Second step (or simultaneously) is the launching of a dialogue with the Ministry of Education in order to have an agreement for the implementation of blue schools. The Ministry is a key actor to give visibility to this concept: first to provide rightfulness to it, and to take ownership. This agreement can be achieved through a common approach on technical solutions and software that are to be promoted according to national norms and guidelines and in consideration of the water availability.

- Third step is to identify geographical areas and schools that lack access to water and sanitation and analyze the feasibility of reaching them (shortlist of schools to deal with). Next is then to launch a tender to identify which schools (school director, teachers, parents' association) are interested to gain the label blue school. Then an assessment can measure the teachers' willingness and ability, the context of the school towards watsan and be a decision tool to end up with the final portfolio.
- Implementation: it should be contracted to the private sector (infrastructures) and local NGO (software, field practice). The teachers represent key stakeholders: their commitment is crucial and their capacities should be strengthened.
- Communication, promotion of blue schools: One interesting way for promoting blue schools is that the Ministry of Education organizes a competition at regional level and makes an award to "the best blue school".

Component 1: Sustainable access to safe drinking water



Water in schools is used for various purposes: drinking, handwashing, cleansing after toileting, pour-flushing and cleaning the toilets, possibly others uses such as cleaning the classrooms, cooking. The water facilities should then be designed to guarantee enough water. However if quality should be high for drinking water and handwashing, a water of lower quality can be used for the other uses in case of shortage (open well, pond).

The most common water technologies found in schools are :

- Shallow covered wells;
- Borehole equipped with a handpump;
- Water standposts (extension of a piped network);
- Rainwater harvesting.

Many schools have already access to safe water but the infrastructures need to be **improved/ repaired** and both parents and teachers need to be trained on operation and maintenance and informed on the recurrent costs.

Where new infrastructures are designed, special attention should be given within the planning phase to **financial sustainability**. A multi-stakeholders dialogue is recommended to discuss the costs sharing arrangements, if any, among national government (Ministry of Education), local government, community, school, teachers and parents.

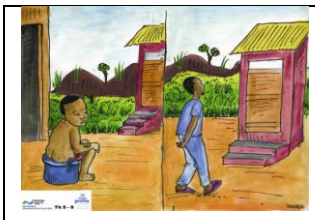
For more information, please see: "strengthening WASH in schools"- IRC /UNICEF/ WSSCC, 2010. download here

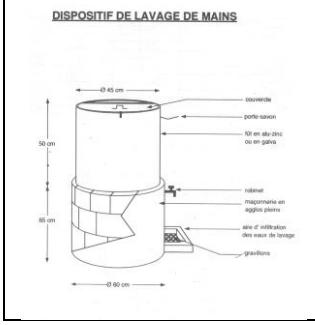
Component 2: sustainable access to sanitation and hygiene

Regarding the technical components, the designing of toilets/ urinals and hand washing facilities should be:

- ✓ Child-friendly: appropriate dimensions and adjustments (easy to use), pleasant (spacious, maintenance-friendly), safe (hygienic, not slippery), with an easy access (appropriate location, minimal waiting time)
- ✓ Gender-sensitive: separate toilets for girls and boys
- ✓ Designed with the involvement of key stakeholders.

Special attention should be given to anal cleansing (collection of materials-paper, leaves, safe collection and disposal of used materials) and menstrual hygiene (safe collection and disposal of pads or materials





used). Adapting the design can be requisite in order to address specific needs of disabled children.

A good operation and maintenance plan goes hand in hand with well-designed facilities: it should detail who is responsible, how often, the materials needed and who finances.

Human development components are the activities that promote good practices and habits towards hygiene. It includes capacity building at all levels (teachers, education administrators, community members, community based organizations, NGO). A participatory approach is the most suitable: it is based on the concept that trainees learn more effectively when facilitators take into account their experience and their needs. Various tools are available (group exercises, brainstorming, role playing etc), developed by SDC and others.
For more information, please see: "strengthening WASH in schools"- IRC /UNICEF/ WSSCC, 2010. download here

Component 3: popularizing cost-effective micro-irrigation practices

In rural areas, pupils are farmers' children, they often help their parents after school and some of them will also work in the agricultural sector. As well as for hygiene behaviors, children are good promoters of innovation and changes at home. Hence the concept of a school garden where benefit of the irrigation systems can be showed and contribute thus to dissemination.

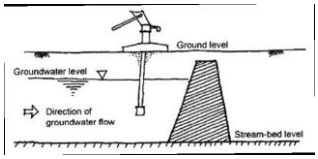
A **school garden** presents both educational aims and economic/food security aims: it is essential that its educational role is reflected in the curricula. Special attention should also be given to enhance the participation of all stakeholders (students, parents and teachers) in the planning and implementation; a reliable and sustainable source of technical advice on garden development and management, irrigation systems (possibly nutrition) should be provided. The school garden should be located within the school or nearby; a small parcel can be assigned to a group of pupils for practical work.

Regarding school gardens, please refer to FAO documentation: concept note download, manual download and teaching toolkit download

While implementing teachers and children should learn about the relationship between food production and water, crop cycle and water demand, the advantages of cost-efficient irrigation systems especially micro-irrigation.

SDC has developed in India, Bangladesh and Nepal **irrigation technologies affordable for the poor**, such as treadle pumps, low-cost drip and sprinkler irrigation systems (low pressure systems: by gravity or with a 1-5m elevation). These cost-effective technologies are produced and marketed locally and currently being up-scaled in West Africa, Central America and Central Asia. In parallel SDC has promoted a dissemination approach through the creation of profitable local supply chains, demonstrations and test fields. When possible the link should be made between the blue schools approach and the productive water approach.
Nota bene: i) Treadle pumps prices ranged from US$ 20 to US$ 100, ii) Household garden kit (hanging plastic water storage + micro tubes): US$ 5-15 ($20m^2$)
To be linked with the SDC project "Scaling up of productive water for irrigation", implemented by IDE, Central America, West Africa, Central Asia- 2009-2013

Component 4: popularizing watershed and land management practices



SDC has developed in Latin America technologies and good practices regarding **water harvesting, water conservation and means to fight erosion.** Smart solutions have been developed as well by a consortium of Dutch organizations (see below): they are easy to implement and cheap. Pilot in schools is a good option to make them accessible to a wider audience, with children as a "driving belt".

Regarding the thematic **"water harvesting"** (use of surface runoff) and **"water conservation"** (encouraging infiltration and storage of rainwater, groundwater recharge), all conditions should be carefully studied before selecting a suitable system: climate, slope, soils and crops. Examples of systems in semi-arid regions: sand dam, subsurface dam, percolation pond, infiltration trenches; examples in sloping areas: vetiver or stone contours lines.

Agronomic methods to control erosion are the following: contour farming, strip cropping and strip reclamation, zero tillage or limitation of tillage, mulching, cover crops and multiple cropping, use of trees and woodland. **Technical measures to reduce runoff** should go hand to hand with the farming measures; they can be done at farm level, slope level or catchment level: barriers to reduce the speed of running water, terraces, drainage, gully control.

For more information, please refer to : "Smart water harvesting solutions":
http://www.nwp.nl/en/about_nwp/Publications.php
And "Erosion control in the tropics", "water harvesting and soil moisture retention"
http://www.agromisa.org/index.php

Examples of activities to be promoted with teachers and children are the following: i) knowledge of good practices regarding water and soil conservation and the concept of watershed management, ii) identifying areas with good practices close to the school for visit and for children's learning, iii) drawing a map of the school area and the context where it is located, identifying risk areas, e.g. poor drainage, erosion, insecurity and support actions to improve school environment and security.