

## **The challenge of rainwater harvesting: Creating awareness and education**

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**Environmental protection can be defined as the basic provision for the continuing existence of mankind. Unfortunately the awareness of such understanding is not automatically available even though everybody must contribute towards it.**

I noted with interest the remark by the Hamburg Environmental Authorities that rainwater utilization does play a main part in this respect. In their opinion the utilization and processing of rain water will help bring about a growing awareness of environmental problems to other trade branches such as heating, road traffic, etc.

### **How to Inspire Children**

All of us must endeavour to educate the next generation to deal responsibly with energy and water. When I installed the rainwater harvesting system on my premises 16 years ago, I included a water level gauge which shows the height of the water level in the underground storage facility. This is of course fully unnecessary for the proper functioning of the system, as mains water make-up is automatically effected when so required.

When it rains and the children cannot go into the garden or play ball in the streets then they can go down to have a look at the level gauge and then after a few minutes come proudly up to pronounce: "Well Dad, the rain has again provided more water for storage". Simple devices like this can help children become aware of the environmentalism aspects of rain which they would otherwise regard as negative.

### **Water Theatre**

12 years ago the pedagogical concept of the Water Theatre was born. The Ministry of the Environment of the German state of Hessen, in cooperation with Natural Protection Centre at Wetzlar/Hessen, developed this idea for pre-school aged children. With puppets they showed the adventures of a raindrop. During the first seven years finance had been made available for 200 performances of this theatrical group under the direction of Mr. Lemb.

## **fbr Association for Adults**

10 years ago fbr was founded. Its purpose is to promote water recycling and rainwater utilization, save drinking water and reduce sewage. Its responsibility lies in the creation of a provision against future contingencies, while at the same time taking into account all aspects of environmental protection, science and research.

It is a German nation-wide professional association of people, companies, local authorities, offices, specialized trading companies and institutions interested or already actively involved in water recycling and rainwater utilization. The association is a registered non-profit-making (NPO) organisation with headquarter in Darmstadt, Germany. fbr is a non governmental organisation (NGO). [www.fbr.de](http://www.fbr.de)

Within the association, members are active in work groups dealing with all topics water recycling and rainwater utilization. Members are people, companies, local authorities, offices, specialist trade and institutions interested or already actively involved in the use of water recycling and rainwater utilization

From 2006 on fbr will help to organize the European branch of International Rainwater Catchment Systems Association (IRCSA). [www.ercsa.eu](http://www.ercsa.eu)



## **Rainwater Harvesting in Schools**

Salem College is the latest addition to the school at the Salem Palace, in the town of Ueberlingen on Lake Constance. Prince Max von Baden and Kurt Hahn, the great educator and reformist, founded this school, which is rich in tradition, in the 1920s. Since October 2000, nearly 100 students have been housed in this college, the largest private school in Germany. This institute is sponsored by the Deutsche Bundesstiftung Umwelt [German Federal Environmental Foundation] as an official project of the World EXPO 2000, Hanover. In a headline in the school's promotional brochure, the administration proudly declares that: "Rainwater utilization is a prime example of how ecologically compatible processes can be employed without impacting water quality."



### **Students monitoring**

The stated objective of the educators is to demonstrate the ecological aspects to their students in a clear and understandable manner. Instruments that monitor and control water and energy consumption demonstrate daily use; this provides increased awareness of applied technology and provides facts and figures that back up theories.

### **Students presenting on conferences**

As part of the Ueberlingen Water Festival in October 2004 Ulrich von Muehlen and Klaus W. Koenig made a conference for students from schools of the Lake of Constance region.



The presentations have been made by groups that worked on water projects in the school. One of those groups was Burg Hohenfels School. Ten year olds taught fellow students how

to save potable water without reducing hygiene standards. Daniel Schmeh as the representative speaker for this group was happy to announce that after half a year the school reduced water consumption by 30 %. The money that had been saved by reducing water consumption was given to a water project of development in Guinea/Africa.

### **Student building a Rainwater Harvesting System for his school**

Another initiative was the irrigation project at Steiner school in Ueberlingen. 18-year-old Manuel Oeder presented the ideas and results of his one year of studies. The task was to use the rainwater from the roof of the school for irrigation of vegetables.



At German Steiner schools the younger students learn how to grow vegetables as a lesson. The vegetables which are harvested are used in the kitchen of the school's restaurant. So irrigation by rainwater from the roof of the school helps to reduce stormwater runoff problems in the city and at the same time it helps to feed the students. Manuel had to find professional help to plan and realize his project. It was his challenge to organize the project without help from his school. He asked Klaus W. Koenig for advice and some companies for funding. Bommer plumbing workshop nearby supported him with tools and material. GEP manufacturer of rainwater harvesting systems donated the pump and fittings. In the end he exhibited his project in Ueberlingen as a part of the Water Festival. His teachers encouraged him to give a presentation to the public. Now the school saves potable water and has some contribution to the natural water cycle.

Through applied projects such as this students are proud to show the adult world what can be done for environmental protection as the basic provision for the continuing existence of mankind.