

Summary of the SODIS Workshop in Kisoro Uganda 13-15 June 2007

A three days Training Workshop was held in Kisoro, Uganda with participants from Uganda, Kenya, Cameroon, Congo, Ghana and Malawi. The facilitators were the Uganda Project Team (Peter Bahizi, Jacques Masiko, and Zepha Mukalere, Catherine Mwangi from Kwahio (Kenya), Bob Dell (Canada) and Regula Meierhofer and Valérie Cavin from EAWAG (Switzerland)

A first objective of the workshop was to build up the capacity of senior staff of the the starting SODIS Projects by training them on technical issues on SODIS technology and promotion and dissemination approaches so that they could be able to train other staff as SODIS trainers and promoters. The second objective was to enable the exchange of experiences between the different countries. The workshop was a full success. It has enhanced the knowledge of the participants, has created new friendship between the different projects and laid the headstone of the foundation of the AFRICAN SODIS NETWORK.

As the workshop documentation given to the participants was quite complete the report will only contain some of the main questions and discussion points faced during the workshop to complement the documentation.

1 Method

- **Demonstration of the power of the sun:** put a glass cullet or a lens in the sun and let paper or dry grass burn
- **Turbidity Test:** Alternative to a newspaper → put the fingers behind the bottle and try to count them, if it is possible the turbidity is below 30 NTU
- **Bottles:**
 - We can assume that about 95 % of the bottles are made out of PET
 - Look at the bottom of the bottle and search the Pet recycling-sign



PET

- PET bottles with a bluish shine can also be used for SODIS application
- Do not paint the bottles in black anymore, there are better results with a reflecting material in the back
- in case one of the family members is sick give him a separate bottle to avoid the transmissions of illnesses
- Do not put the bottles on a grass roof → the grass can have an isolating effect on the bottles and decreases the water temperature,

- second the bottle can sink into the roof and the UVA can not reach the whole bottle. Make sure that they are put on a hard underground, like stone, wood or an iron sheet.
- Colored bottles can not be used, because the color is absorbing the UVA and limiting the radiation into the water
 - Phthalates and Adipates diffusion → sensitizations, that there is very little diffusion of this two chemicals into the water and therefore no harm using PET-bottles is important
 - The water, which is in the cover and protected from UVA radiation is also disinfected, because of the circulation effect of the water inside the bottles
 - Possibility of recycling old bottles: use them for dripping irrigation, construction materials, pots for flowers and seedlings or recipients for other fluids
- **Water testing:** 3M Petrifilm E. coli/Total coliform : Add 1 ml water to centre of the film, close the flap, gently move around to cover the whole centre and then lay flat for 5 minutes until the gel sets. Incubate at 38 degrees for 48 hr if possible. Lower temperatures take longer for colonies to develop.
 - **Storing the water**
 - Problems of recontamination if storing the water in another container → if it is done, then only in a second step, when the families are really aware of all the hygienically impact that it could have.

2 Promotion

- **Marketing strategy:**
 - The technology should not be promoted to be only for the poor people
 - The marketing message should be: SODIS is a trendy and affordable method
 - SODIS table can look fancy and modern and give a certain prestige to use SODIS
- **Target group:** Target mostly the children and women, because they are responsible for the water in the household → drinking SODIS water should become a lifestyle and children can change their habit quicker
- Test it in rich and poor regions to have more convincing arguments

Sensitization

- **Create a need for water treatment**
 - What are the diseases?
 - What is the reason, cause of these diseases?
 - What could be a solution?
- Experiences of local promoters is crucial
- A good promotion needs passion, visions and local leadership
- Create focus groups to teach others (children-parents)
- Demonstration at project center enhances the visibility
- Choose at the beginning families with a lot of diarrhea cases → easier to show the effects and to convince others
- Posters printed on tissues are more resistant to changing weather
- Sodis t-shirts, caps creates identification with the method

3 Bottle supply

- **Main sources of bottles:**
 - Individual on household level
 - Hotels, restaurants, airport, tourist places etc.
 - Bottle manufacturer
 - Use events like funerals, weddings, ceremonies, big workshops to collect the bottles
 - Ask waste collectors to get the good bottles for SODIS
- **Small business:** look for business men/women to build up a retail channel of bottles
- **Organizations:** Ask churches, lions clubs, health center, other organizations to take care of the bottle supply
- **Important for the sustainability:** do not give the bottles for free apart a set of two per family to be able to start immediately after the workshop
- **Arguments to buy bottles:** The amount you use to buy the bottles is much less than the cost that you can save using SODIS (health benefits, reduced cost for medical treatment) → Be aware of the economical benefits

4 Contamination route games

- Phast training of the trainers takes 3 days to do it seriously
- Do not draw too much pictures, this may confuse the people and make it too complicated
- Hand washing can be made with soap or ashes
- Tippy tap example for hand washing: → see attachment

5 Diverse issues:

- Guinea worm: not a big issue for a contamination within water → in areas where Guinea worm infections are common, to filter the water is the best way to prevent it

6 Evaluation of the theory part

- Exchange visit between countries would enhance the sharing of experiences
- An SODIS AFRICA NETWORK should be created to exchange information between the countries: we will start with a net on a e-mail base coordinated by Bob Dell and if possible start with an electronically newsletter
- Would nice to have a documentation on frequently ask questions →check the webpage <http://www.sodis.ch/Text2002/T-FAQ.htm>
- Statistical analysis can be used as an argument for convincing others → that's why it is important to do a good monitoring (data collection, particularly health status, for the baseline in the beginning)
- It was very important to have local experiences to share like the one of Uganda and Kenya
- More time should be given to share experiences
- Friendship is one of the most important output of the workshop
- Documentation of the workshop was simple and can be easily used
- Personal challenge after hearing the experiences of others →This gives some more motivation to try its best at home
- The ownership is a key point for the success of the project
- Household water treatment Newsletter → send e-mail and address for getting the newsletter (http://www.who.int/household_water/en/)

7 Field visit observations

Diverse Observations

- the field visit has completed the picture that the participants had on SODIS
- the visited families have internalized the process of the method
- the families were very well aware of the basis of hygiene behavior
- there was a quite motivated field staff
- the people were proud using SODIS
- there is a good base for a scaling up, because there are potential promoters within the users
- SODIS can be used by every body and it is not depending on the educational level of the person
- Tippy tap system could be introduced with the SODIS promotion
- People started to drink more water!
- we should not exclude to drink the SODIS water in a clean cup

- the bottles should be washed with a soft material like a sponge to avoid scratches
- SODIS only prevent water born diseases: within the promotion and the sensitization the different class of diseases should be explained. This would avoid that people might think that SODIS prevents all kind of diseases like malaria, flu etc.
- it is important to make people aware that they have made a step forward and that they can do it on their own
- there were some people having brown spot on their teeth →this might have its cause on the fluoride concentration of the water and has to be followed up by the project

- **Sustainability:**
 - the availability of bottle is not assured on the local market → this has a big impact on the sustainability of the project and is the biggest challenge at the moment
 - the bottles were given them free as well as the other facilities →to increase the sustainability the families will have to start to buy the bottles and SODIS table on the market
 - a marketing system for the bottle supply should be in place at the beginning of the project
 - having a SODIS table might not be affordable for all families and be a hindering factor for the further dissemination →so it is important to promote the SODIS technology with putting the bottles on the roof fixing them with a small stick at the bottom
 - bottle do not have to be bought all together at one time but slowly added up per example on a monthly basis to reduce the financial burden

- **Beneficiaries:**
 - Beneficiaries were only compassion members and this might create jealousy among the villagers → the project should expand their activities also on non compassion members; therefore the WATER SCHOOL was founded.
 - The women are the focal persons for the sensitization
 - The project should try to find further organizations working in the same field to add the SODIS component in their on going programs