

SODIS - WATER QUALITY IMPROVEMENT AT HOUSEHOLD LEVEL

A CASE EXAMPLE FROM GUATEMALA

SUMMARY

The international NGO Catholic Relief Services (CRS) is carrying out - among others - a food security program in two regions of Guatemala. In this program, the topic of safe water was introduced because the issues of safe water, diarrhoea and malnutrition are closely interrelated. CRS was trained in the technical aspects of Solar Disinfection of Drinking Water (SODIS) by the SODIS Foundation, an international organization responsible for the dissemination of SODIS in Latin America. CRS and two of its local partner institutions (Cáritas Diocesana Verapaz and Fundemi Talita Kumi) then presented this innovative method to the committees previously formed in the local communities. After the acceptance of the method, CRS and its partners trained health post staff, the local authorities, and the schools. After one year of project implementation, more than 700 families are using SODIS on a regular basis. The SODIS method was especially well received in schools, where it was included in the programme of 'healthy schools'.



THE CONTEXT

Location of the project

The Project is implemented in Guatemala, the country with the largest population and economy in Central America. However, 3 out of 4 people in this country live on less than 2 dollars per day, and the unemployment rate is high. 60% of the population are indigenous people speaking over 21 Mayayan languages. The project started in the area of Baja Verapaz, in the Municipality of Cubulco, and it later was extended to the Municipalities of Salamá and Granados (Baja Verapaz) and to the Municipality of Chisec in Alta Verapaz.

Water supply and quality

The majority of the communities have water distribution networks with household connections. 30% of the population does not have a household connection, and more than 90% of the local people had problems with faecal contamination of their drinking water prior to the project implementation.

Health situation

Given the situation that diarrhoea was the third most frequent disease in the region, the Public Health Ministry was asked for support in order to improve the quality of the drinking water.

Political and Policy Aspects

Initially, the Ministry of Public Health only paid very little attention to the issue of water quality. There was no institutional program for water quality and no resources were allocated for monitoring and educational activities.

Social Aspects

The Project is located in a very rural setting. 90% of the people live in rural conditions; they are very poor, therefore the international non-governmental Organisation Catholic Relief Services (CRS) started a food security program in the area. 80% of the population belongs to the indigenous groups of Kekchi y Achi.



Fig. 1: In Baja Verapaz diarrhoea is a very common health problem especially for children.

THE PROJECT

Objectives

The objectives of the project are to improve the living conditions in the communities by giving them options of water disinfection at the household level and by encouraging healthy habits.

The project is directly benefiting around 1,000 families and their members.

Strategy

The project is being implemented along two strategic interventions: training at the household level and school programmes. CRS coordinates the implementation with the local partners and is responsible for training of personnel.

Actors

The main local partner of the Project is Catholic Relief Services (CRS), an international NGO. They previously were trained and supported by the SODIS Foundation, a non-profit organisation responsible for the diffusion of SODIS in Latin America. CRS in turn trained their local partners, *Cáritas Diocesana Verapaz* and *Fundemi Talita Kumi*. These partners were the ones carrying out the household visits, with the support of the local health posts.

Duration

The Project started in March 2003 and has a duration of two years.

Financing

The project is funded with 7,000 USD by the SODIS Foundation, mostly for the production of educational material, training activities and water analysis. The counterpart of CRS receives a similar amount for administrative costs and infrastructure. This results in per capita costs of less than 3 USD per SODIS user.



Fig. 2: Especially women are addressed with training on improved hygiene practices and SODIS.



Fig. 3: Promoters collaborate with local health posts to disseminate community education.



Fig. 4: Schools are an important entry point for the promotion of SODIS

ACHIEVEMENTS AND FACTORS OF SUCCESS

Participation at household level

Prior to the SODIS activities, CRS was active in the project area through its programme of food security. During that programme, local committees were established in the respective communities, and the project of water disinfection was proposed to the sectors most in need. Currently, around 700 families are using SODIS on a regular basis in their homes, and more than 500 children use in the schools.

Institutional cooperation

During the project, institutional cooperation with different actors in the health sector was established: the district offices of the Ministry of Health (Alta Verapaz and Baja Verapaz), the Institute of Municipal Support (INFOM), and staff of the Pan-American Health Organization (PAHO).

In order to facilitate the inter-institutional cooperation, monthly meetings are held, and currently a group for water quality is being formed with the participation of PAHO.

There have been considerable successes at different educational institutions. This was additionally supported by the fact that SODIS fits very well into the national programme of 'healthy schools'.

Water Quality & Health improvements

In the framework of its program on food security, CRS carried out a baseline study on the water and health

situation in the intervention communities. Data collected during the project revealed a significant diarrhoea reduction: the diarrhoea incidence of 200 cases in 2002 was reduced by 75% to 50 diarrhoea cases in 2004.

Awareness Building

The diffusion of SODIS was implemented in a cascade of training sessions: The SODIS Foundation trained CRS, who in turn trained their local partners, who then trained the local population. This enabled the actors to increase the awareness on the importance of safe drinking water.

Factors that facilitated these achievements

- CRS and its local partners are present in the region since several years. The close relation established with the local population contributed to the acceptance of the new method for disinfecting drinking water.
- CRS is managing data on the local health situation through its project on food security. This enabled them to assess the impact of SODIS use on the health of the population. This information was shared with the local office of the Ministry of Health.
- Cooperation with the local health authorities proved to be very helpful in achieving a wide acceptance of SODIS.

Cases of diarrhoea in Chisec (Alta Verapaz) before ('02) and after SODIS implementation ('04)

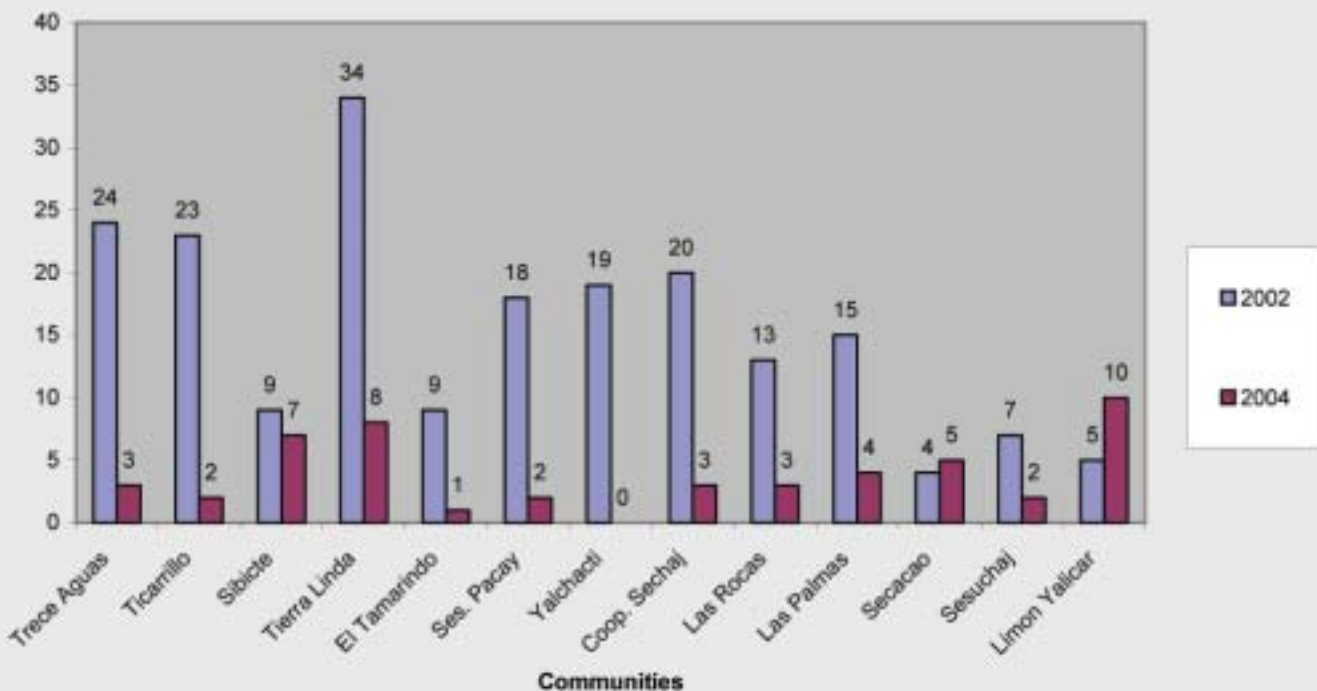


Fig. 5: Cases diarrhoea in Chisec (Alta Verapaz) before and after the introduction of SODIS

THE CHALLENGES

Constraints

Initially, there were some cultural barriers to be overcome, as there was a general impression that the method is not effective. Additionally, the resources for project implementation were limited, which has limited a further diffusion of the method to neighbouring regions.

Potential for scaling up

The SODIS activities were embedded in a project of food security. This made it possible to reach a large number of people with limited resources.

Thanks to the simplicity of SODIS in its application, there is considerable potential for the method being included in similar projects.

Given the fact that in Guatemala 1 million people do not have access to improved water supply, the potential for household methods of water disinfection is very large.

Lessons learnt

- The combination of activities in food security and water safety achieved a significant decrease in diarrhoea rates. These two topics complement each other and can easily be combined.
- It is essential to involve staff of the Ministry of Health, especially of the local health posts. This gives a high credibility to the project and the method.
- Culture and tradition have to be taken into account when working with SODIS. The customs and daily habits have to be analysed prior to the project implementation in order to overcome potential cultural barriers.

REFERENCES & PARTNERS

Catholic Relief Services is an international relief and development agency based in the United States of America. It has been working in Guatemala since 1963 in the areas of food security, water and sanitation, health, education, HIV/AIDS, and disaster preparation and mitigation.

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The SODIS Foundation is a non-profit organisation working in Latin America for improving living conditions of people who do not have access to safe water.

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Fig. 6: By drinking SODIS treated water, a significant reduction of diarrhoea was achieved.



Fig. 7: Exposure of bottles