



Project: Ensuring Safe and Resilient Drinking Water Supply Services for 3 Communes in Times of COVID-19

Project Timeframe: May - June 2021

Successful Story



SECURING SAFE DRINKING WATER FOR RURAL COMMUNITIES IN CAMBODIA AMIDST THE COVID-19 CRISIS

Access to safe water and sanitation services is essential for maintaining proper hygiene, which is necessary to halt the transmission and mitigate the effects of the COVID-19 pandemic. Regular handwashing and access to safe drinking water are emphasized as crucial measures for achieving this goal. Nevertheless, in rural communities of Cambodia, people face challenges in obtaining regular clean drinking water and water for handwashing due to climate change, resulting in long-standing droughts throughout the year. Climate change poses a significant threat to water systems through various impactful events such as heightened droughts, floods, and severe storms. These occurrences demand that water systems enhance their resilience to mitigate potentially devastating consequences. According to [the Climate Change Knowledge Portal in 2012](#), Cambodia is highly susceptible to climate change and roughly 80% of the population residing in rural areas experiences extreme weather events like floods and droughts, posing an increasing risk to the reliability and sustainability of water supply systems, particularly in rural areas. According to [An Analysis of the Situation of Children and Adolescents in Cambodia in 2023](#), national evaluations of drinking water quality at the consumption point in 2013 and 2015 revealed that 77% of rural households and 42% of urban households were consuming water contaminated with fecal bacteria, posing a health risk to children.

As part of a commitment to ensure long-term access to safe drinking water in Cambodia through funding support from the EU, Sweden, and UNDP, the Cambodia Climate Change Alliance Phase III (CCCA 3) has supported Teuk Saat 1001, a Cambodian NGO that establishes small water production units, called water kiosks, in rural communes. Teuk Saat 1001 led the project “[Ensuring Safe and Resilient Drinking Water Supply Services for 3 Communes in Times of COVID-19](#)” to provide access to sustainable, safe, and affordable drinking water, through climate change resilient water kiosks in three communes of Siem Reap, Thbong Khmum and Kompong Thom provinces. The project aims to mitigate the effects of climate change by ensuring safe drinking water operational continuity even for 3 communes during COVID-19. Thus, the project focused on integrating COVID-19 hygiene protocols into the water kiosks. To achieve this, a comprehensive standard for disinfecting the kiosks was provided to the entrepreneurs, who then conducted the monthly disinfection process.

Safe Water, Safe Communities in Stopping the Spread of COVID-19:

To mitigate the spread of COVID-19 in rural communities, CCA3 collaborated with Teuk Saat 1001 to ensure continuous access to safe water for rural communities during the time of COVID-19, to promote COVID-19 prevention understanding, and to implement COVID-19 hygiene protocols in the water kiosks. Through this project, Teuk Saat 1001 has established water kiosks equipped with solar panels, implemented the “Water in School” Sponsorship Program to provide free jugs of safe drinking water to nearby primary schools, provided entrepreneurs training, and strengthened capacities of water entrepreneurs and communities in the three target communes to prevent the spread of COVID-19.

As a project implementer, Ms Stephanie Seng, Partnership Manager at Teuk Saat 1001, elaborates on the challenges faced during project implementation.



Ms Stephanie Seng, Partnership Manager at Teuk Saat 1001

Ms Stephanie mentioned that “one significant challenge arose when villagers had difficulty distinguishing between safe and unsafe water. Sometimes, they consumed unboiled water, and even when they did boil it, the temperature often failed to reach a level sufficient to kill bacteria.”

Significantly, a clearer understanding of the COVID-19 pandemic and how to prevent infections has guided communities to adopt the most effective and safest practices. Consequently, the villagers could follow protective behaviors, and the water entrepreneurs could implement safety measures, including maintaining social distancing during water deliveries. To address these challenges, Teuk Saat 1001 raised awareness in the communities about safe drinking water through door-to-door promotion, distribution of COVID-19 hygiene products, and dissemination of educational printed materials to mitigate the spread of COVID-19 and raise awareness of prevention measures within the communities.



Mrs Chok Netra, an O-we Water Entrepreneur

Mrs Chok Netra, an O-we water entrepreneur, explained that the water kiosk is safe for the villagers to drink without worrying about any illness, and she highlighted that “This water kiosk no longer requires boiling because it undergoes multiple purification stages to ensure its safety. Our production process includes purification through sand, coal, and resin, followed by disinfection in another stage.”

Ms Stephanie explained that “Teuk Saat 1001 utilized a decentralized model, which means the O-we Family does not belong to Teuk Saat 1001, but it belongs to the communities.



To sustain the operation of the O-we Family, Teuk Saat 1001 works with communities, communes, and entrepreneurs by applying an entrepreneurship model in which people working in O-we water will get income. This is an innovative way. The entrepreneurs get the income and provide safe water to the communities”.

Mrs Chok Netra mentioned how she could be a water kiosk entrepreneur, “When Teuk Saat announced the recruitment of water entrepreneurs, I was interested and applied to be a water kiosk entrepreneur. Before the introduction of water kiosks, people in the communities suffered from various illnesses such as diarrhea. However, things have significantly improved since the existence of safe water for their daily use.”



Ms So Korn, a Water Kiosk Consumer

Similarly, Ms So Korn, a water kiosk consumer, described her experience of drinking water kiosks that, “In the past, we used well water, which had a negative impact on our health, causing issues such as diarrhea. However, the use of water kiosks promotes good health and well-being.”

To promote the importance of safe drinking water in preventing COVID-19 among the communities, Netra stated “Teuk Saat 1001 provided training courses on technical skills for producing safe drinking water through each stage of the purification process. Teuk Saat 1001 also assisted us in advertising clean water. After launching the advertising campaign and attracting customers, I delivered clean water to them. In case of any technical issues, Teuk Saat also supported us.”

It is crucial to raise awareness about safe drinking water and highlight the risks associated with unsafe water, as this can foster positive behavior change within communities and encourage them to consume clean water. As a result of the project, villagers could adopt best practices by avoiding the expense of boiling water with charcoal and relying on monthly-tested safe drinking water, thereby protecting their community’s health.

Innovative Solutions Toward Safe Water:

To ensure sustainable access to clean water for rural communities, Teuk Saat 1001 implements three solutions: high-quality standards, social initiatives, and water in schools sponsorship program.

Firstly, Teuk Saat 1001 ensures high-quality clean water standards by subjecting water kiosks to multiple processes. River water is collected using a pump and piped water system, stored in tanks, and then filtered through various mediums such as sand, carbon, and microfilters. Subsequently, the water undergoes disinfection using UV lamps, effectively removing all bacteria, and guaranteeing consistently clean water of superior quality. The purified water is then packaged in 20-litre bottles, ready for consumption.



Secondly, Teuk Saat 1001 is a social initiative. Currently, the O-we network comprises over 300 entrepreneurs and water stations, distributing over 12 million litres of water monthly. This initiative benefits more than 858,000 individuals, including 310,000 school children, ensuring access to safe drinking water across more than 2,500 villages. Efforts will be made to extend the provision of safe drinking water to as many people as possible.

Thirdly, Teuk Saat 1001 supports free water access in schools. The “Water in School” Sponsorship Program, launched in 2008, ensures the daily provision of safe water to 280,000 children attending primary schools in villages where Teuk Saat 1001 operates water kiosks. With a donation of \$2, safe drinking water can be supplied to a child at school for one year. Studies have demonstrated that the implementation of O-we in schools has led to a reduction in absenteeism.

Through this project, monthly water quality tests confirmed compliance with World Health Organization (WHO) and national drinking water standards, conducted by the Teuk Saat 1001 laboratory. A total of 21 tests were performed. The selling price is set to be affordable for the communities while allowing the entrepreneur to earn a reasonable income. Water is delivered to homes, and the combination of the social franchise and the ‘Owe committee’ commitment ensures the long-term sustainability of the water kiosks.

The significant achievement of the project was illustrated through the establishment of three sustainable solar panel-powered water kiosks in 3 communes with 31 villages, providing more than 6,000 people with access to clean water daily. The three communes are sensitized to safe drinking water, climate change impacts, and COVID-19-safe hygiene measures, in which 1,050 households have received information and hygiene items to help protect against COVID-19. To ensure the safe production of clean water, the water entrepreneur, their operators, and the O-we committee received training on the methodologies and best practices for operating the water kiosk, including thorough disinfection procedures, especially during the COVID-19 pandemic. A key outcome of the project was to reduce COVID-19 spread in rural areas by implementing safe hygiene practices. Through the project, the kiosk team distributed 108 posters and 50 flyers on hygiene and conducted door-to-door promotions to 1,617 households about hygiene messages and water kiosk operations. Additionally, the entrepreneurs, operators, and O-we committee of each kiosk effectively grasped and applied the guidelines. Each kiosk staff also disinfects their area four times a month.

Due to COVID-19, the project was unable to provide safe water to primary schools because all schools were closed. However, the allocation was on hold and was used once the schools reopened. As a result of the project, nine entrepreneurs not only sell safe drinking water but also offer free jugs to nearby primary schools as part of the “Water in School” sponsorship program. The Water in School sponsorship program was implemented at eight primary schools and 2,087 students could receive free safe drinking water.

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Project’s Impact on COVID-19 Response and Deduction of CO2 Emission:



By eliminating the CO₂ emissions associated with boiling water and utilizing solar energy, the carbon footprint of the Teuk Saat 1001 water kiosk model is positive, resulting in the avoidance of 100 tons of CO₂ emissions annually in Cambodia.

In the scale-up plan, a partnership program between the Department of Rural Water Supply of the Ministry of Rural Development and Teuk Saat 1001 aims to share innovative solutions and methods to ensure access to safe water, particularly in rural communities affected by drought.

Teuk Saat 1001's mission is to provide long-term support for water kiosks, focusing on ongoing monitoring rather than just completing specific projects. The water kiosk's sustainability is ensured through a tripartite model: the commitment of the commune council (kiosk owner), the oversight by the O-we committee (key local leaders), and Teuk Saat 1001's close monitoring. This approach has proven effective, with 79% of the kiosks established since 2010 still in operation.

The social franchise support helps water entrepreneurs tackle daily challenges. Regional technicians are available for technical issues, while a field advisor assists with business operations and management. Monthly meetings with entrepreneurs and operators provide a valuable platform for discussing challenges and sharing best practices. Teuk Saat 1001 is dedicated to continuously improving kiosk performance and addressing any new challenges. If necessary, pilot projects and proven solutions are implemented across the network of water kiosks.

CAMBODIA CLIMATE CHANGE ALLIANCE - PHASE 3 (CCCA 3)

The Cambodia Climate Change Alliance (CCCA)-Phase III builds on the achievements of the first and second phase (2010-2014, 2014-19) and provides a unified engagement point to pool resources for the mainstreaming of climate change in national and sub-national policies and programmes. CCCA is a joint initiative of the Royal Government of Cambodia and a partnership between UNDP, the European Union and the Swedish Government. It is implemented by the National Council for Sustainable Development (NCSd) and managed by its Department of Climate Change to address climate change in Cambodia.

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