



CLEAN WATER FOR COMMUNITIES HIT BY CLIMATE CHANGE

Near Cambodia's Tonle Sap Lake, a water purification system is helping people struggling to adapt to higher temperatures, lower water levels, and fewer fish.

BY CHRIS HUFSTADER | FALL 2022

Outside the primary school in Kampong Khleang, on the western edge of Tonle Sap Lake, Riem Monisilong shows visitors how he purifies water from a nearby pond. He pipes the water into a series of tanks, filtering it through charcoal and sand, and then he runs it through a steel tube where a jolt of ultraviolet light kills any remaining bacteria.

Riem is 37 and is known to his friends as "Silong." While working to purify water he wears protective equipment: a face mask and hair net, a gown, gloves, and rubber boots. He fills reusable 20-liter plastic containers with the purified water before sealing them. The Oxfam-affiliated organization Riem works for sells between 150 and 400 containers every month for about 45 cents each, and it provides water for free to elderly people, schools, and people living with disabilities.

A reliable source of clean water, tested regularly and available for a modest cost, helps the people of this community, many of whom are facing financial pressures and an uncertain future. Approximately 80 percent of the communities around Tonle Sap Lake do not have a source of safe drinking water, and two-thirds of these communities consume water from unsafe sources. In addition, the fishing community in Kampong Khleang, like many others on the lake, is suffering from a declining fish population due in part to the effects of climate change and inconsistent rainfall, as well as deforestation and pollution.

Riem, who years ago suffered breathing problems related to toxic fumes from burning garbage (a common way of disposing of waste in the area), takes the

health challenges in his community personally. "I want the community to have clean water," he says. "Working on the project aligns with my goal to help people have better health."

ADAPTING TO A CHANGING CLIMATE

The water purification system at Kampong Khleang was installed by Teuk Saat 1001, a Cambodian organization that is part of a comprehensive project undertaken by Oxfam and the Fisheries Action Coalition Team (FACT) to help Cambodians adapt to climate change, and to protect and improve the environment. Teuk Saat 1001 has installed three water purification systems that serve more than 1,600 families (about

7,000 people). Oxfam and manufacturer Wetlands Work are also providing eco-friendly toilets for homes and schools in nearby “floating villages,” to cut down on sewage flowing directly into the lake.

FACT and Oxfam are also helping communities to create ecotourism and handicraft businesses as alternative livelihoods to fishing. People are learning to run restaurants, drive tour boats, and host visitors in their homes. These alternatives help families diversify their sources of income, reduce pressures on fishery resources, and spread awareness of the sensitive environment around Tonle Sap Lake.

FACT provides training and funds to support fishery committees charged with monitoring fishing areas, and FACT further acts to raise awareness of the harms caused by illegal fishing methods. FACT is also helping communities to reduce plastic and other garbage from going into rivers and lakes.

Tonle Sap is the largest freshwater lake in southeast Asia, and it produces 60 percent of Cambodia’s freshwater fish. In the rainy season, Tonle Sap expands like a bladder, inundating nearby forests where fish breed. Between the changing climate, fluctuations in rainfall and water flow owing to dams in the Mekong River (a major contributor of water and fish to Tonle Sap), and recent changes in government regulations that limit how much fish people are permitted to catch, families are having a tough time making ends meet. One fisherman from Kampong Khleang reports that 10 years ago, “in 24 hours we would get 50 kilos [110 pounds] of fish.” Now, he says, “we get about five kilos.”

WASTE NOT

Oxfam’s collaboration with FACT and Teuk Saat 1001 in communities around the western part of Tonle Sap Lake relies on mobilizing visionary community members like Riem Monisilong to join in the effort



TOP: Lack of water, partly due to changing rainfall patterns related to climate change, is affecting the ability of fishing families on Tonle Sap Lake to support themselves.

BOTTOM: Riem Monisilong installed two eco-friendly toilets in this floating school near Kampong Khleang. The toilet systems process waste on-site and are part of the effort to reduce raw sewage entering the lake.

PHOTOS: Banung Ou/Oxfam

to help families diversify their income and protect the environment. In every community, affiliated organizations form and support committees to manage the community fishery, ecotourism and handicraft training, youth groups for raising awareness about the environment and replanting trees, and people like Riem to purify and sell clean water.

In addition to running the water purification system in Kampong Khleang, Riem also installs toilets in floating homes and schools. The toilet system treats sewage on-site through a series of four digester tanks where bacteria break down the

waste. Riem installed two toilets at the Chong Prolay primary school, a one-room floating schoolhouse at the mouth of the river flowing into Tonle Sap Lake.

Although Riem works full time purifying water and installing toilets, he’s also an artist who specializes in using discarded plastic waste and trash. He has several pieces displayed at the water purification plant in front of the school. Although his art does not make much profit, he says, “It comes from my heart with love.”

“My message to the next generation is to fight climate change and don’t throw your waste everywhere,” he says.



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