



Partnerships for Enhanced Engagement in Research (PEER)



In the high topographical conditions, Khmer people in the Mekong Delta often confront water shortages in the dry season. In former times, the Khmer community often used rainwater stored in lakes and shallow wells in the Khmer temples for agricultural production and domestic purposes.

Recently, tap water has been supplied to over 80% of the rural area, but there is still a lack of fresh water in the dry season, putting pressure on the water sources in the Khmer community. In recent years, these sources have tended to decrease, and the facilities to harvest rainwater are very limited to meet the actual needs of the community.

The PEER research team from the Research Center for Rural Development found that cultural festival events in the Khmer temples are held very often, requiring a large amount of water to supply the religious followers. According to the monks at Ta Ngao Temple, each festival can use up to 3 – 4m³ of water. There are more than 100 large and small cultural festivals at Khmer temples every year. Therefore, a great amount of clean water is used to meet the needs of local participants. In addition, 300 households living near the temple and students from the primary school and the kindergarten also need drinking water during the dry and rainy seasons.

This project aimed to establish small scale rainwater harvesting systems to supply necessary drinking water for the Khmer communities, the most vulnerable socioeconomic groups, in the face of the impacts of climate change in the Mekong Delta.

Khmer people constitute 1.05% of the population in Vietnam and 7.2% in the Mekong Delta. They are one of the most vulnerable communities to climate change.

Some 35% of Khmer people are living in difficult socioeconomic conditions. Their livelihood relies mainly on groundwater for agricultural production and domestic use. However, groundwater may be at risk of Arsenic contamination and increasing scarcity due to overexploitation and the impact of climate change.

In addition, there are other water sources around Khmer temples consisting of rainwater, ponds, and lakes, but the Khmer community lacks sufficient tools to store, exploit, and use the water during the dry season. In addition, many ponds and lakes are also gradually drying up.

Moreover, in the context of water sources been affected by hydrological changes (saline intrusion, alum), they are more vulnerable to climate change.

Khmer people have a long tradition of applying local knowledge to find water sources, assess water quality, and facilitate water governance. However, local knowledge has not been recognized in government policies for water governance at the provincial and local levels.

Therefore, this study was designed to enhance the role of local knowledge, social norms, and culture of Khmer communities in water governance with the aim of improving their resilience to the impacts of climate change.



Photo: water scarcity in the dry season – Khmer pond is the primary source of domestic water use and for animals

Research partners:

- An Giang and Soc Trang Department of Natural Resources and Environment
- Office of Water Resources and Climate Change (An Giang and Soc Trang Department of Natural Resources and Environment)
- Division of Natural Resources and Environment, Tinh Bien District, An Giang Province and Vinh Chau Town, Soc Trang Province.

Beneficiary:

- Ta Ngao Temple, An Phu Commune, Tinh Bien District, An Giang Province

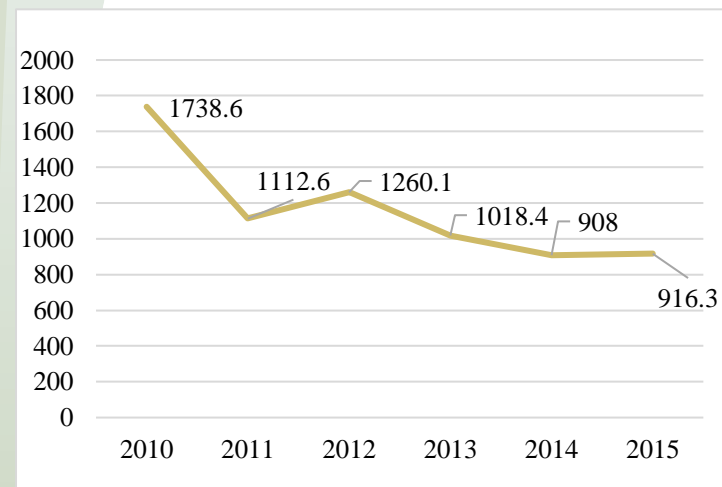


Fig. Average Rainfall in An Giang Province (mm/year)
Source: An Giang Statistical Yearbook, 2015

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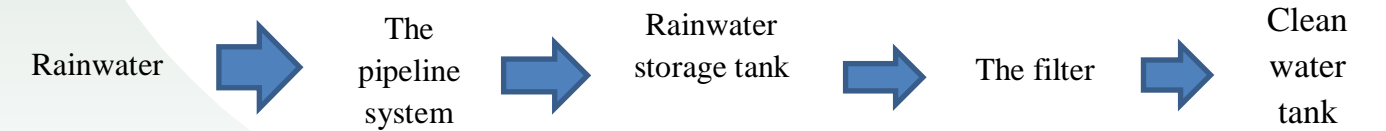
“WATER GOVERNANCE OF MINORITY COMMUNITIES IN THE MEKONG DELTA”

10/2014 - 09/2017 – Code: 03-190



RAINWATER HARVESTING MODEL AT TA NGAO TEMPLE, AN PHU COMMUNE, TINH BIEN DISTRICT, AN GIANG PROVINCE

An Giang, December 1st 2016



Capacity:

- The storage tank with 50 m³
- The filter with 200 liters
- Clean water tank with 1 m³

Technical code:

QCVN 02:2009/BYT

Table. Results of water quality analysis

No.	Indicators	Unit	Rainwater		QCVN 01/BYT	QCVN 02/BYT
			Before	After		
1	pH	.	7,45	7,41	6,5 – 8,5	6,0 – 8,5
2	Hardness	mgCaCO ₃	7,0	7,0	300	-
3	Fe	mg/L	KPH	KPH	0,3	0,5
4	Mn	mg/L	KPH	KPH	0,3	-
5	Coliform	MPN/100ml	93	75	0	150
6	E.Coli	MPN/100ml	KPH	KPH	0	20



Photos: open ceremony for the rainwater harvest project

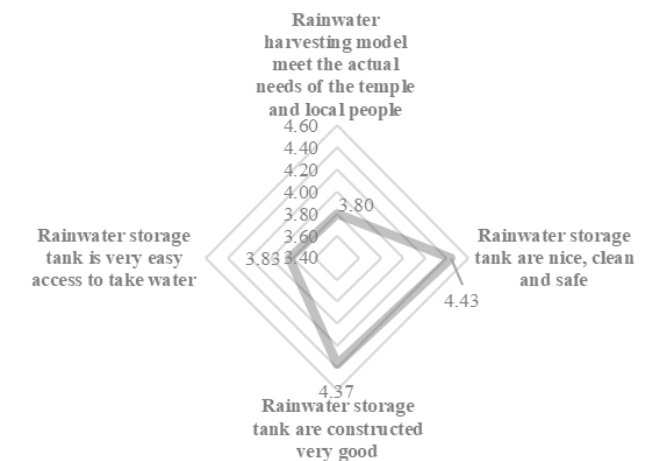


Fig. The assessment of 30 households around the Ta Ngao Khmer temple about the Rainwater Harvesting System were evaluated using a Likert scale with 5 levels: 1. Strongly Disagree, 2. Disagree, 3. Neutral, 4. Agree, 5. Strongly Agree
Source: The survey result of evaluating Rainwater Harvesting Model at An Phu Commune - Tinh Bien District – An Giang Province, 2017