



Technology Introduction



Vietnam



Soc Trang, Vietnam



Long Phu C Primary School

Soc Trang, Vietnam

Status: Operational since October 2023

Facility:

- 10 toilets + 5 urinals
- School with 200 pupils and staff

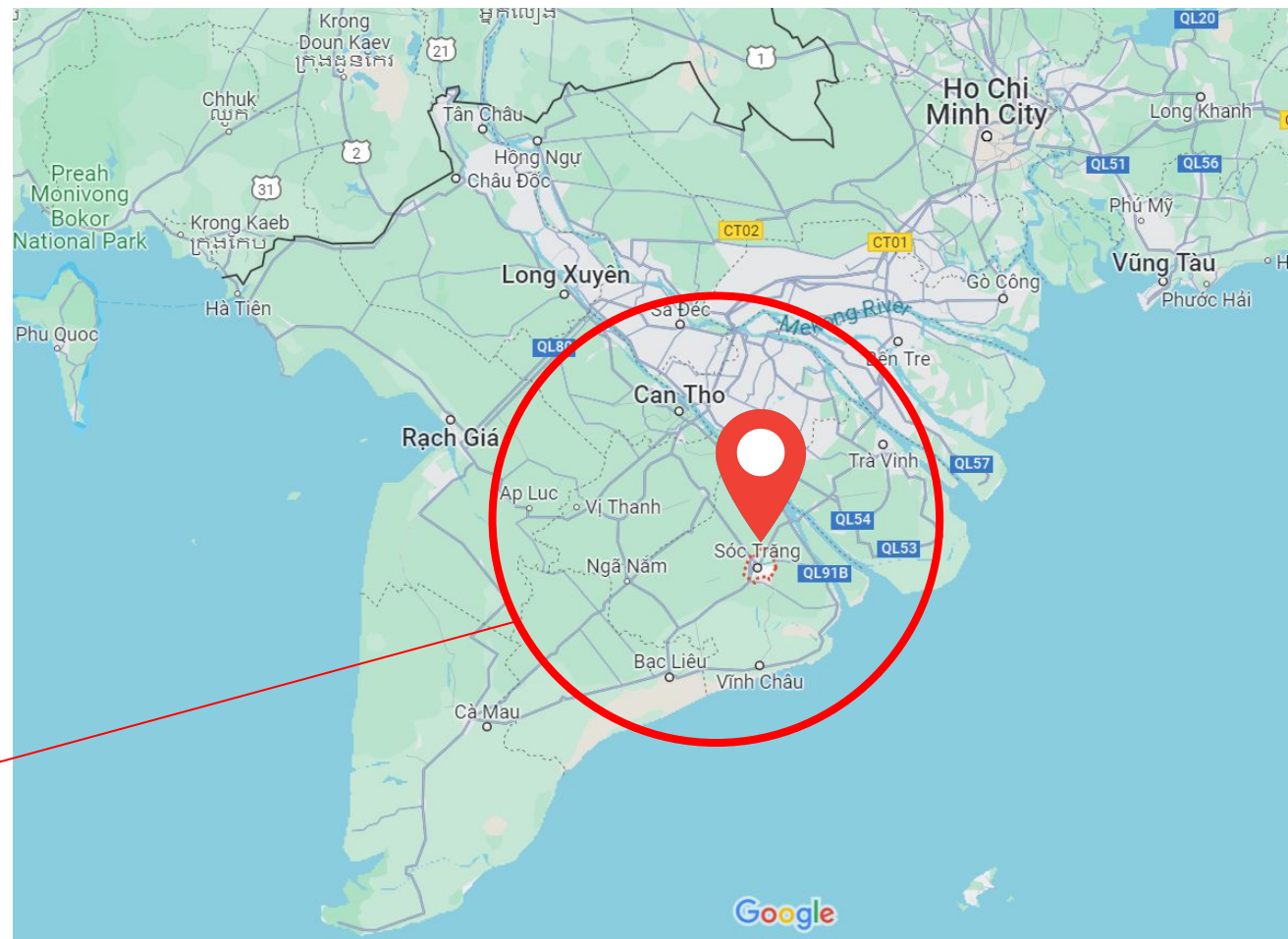
Treated Waste:

- Blackwater from flushing toilets
- Approx. 1000L p/day

Technology setup:

- 1 x Aquonic 1000L tanks
- “Net-zero, Climate Resilient Toilet” concept of an off-grid solution with solar and battery storage power.

Soc Trang, Vietnam



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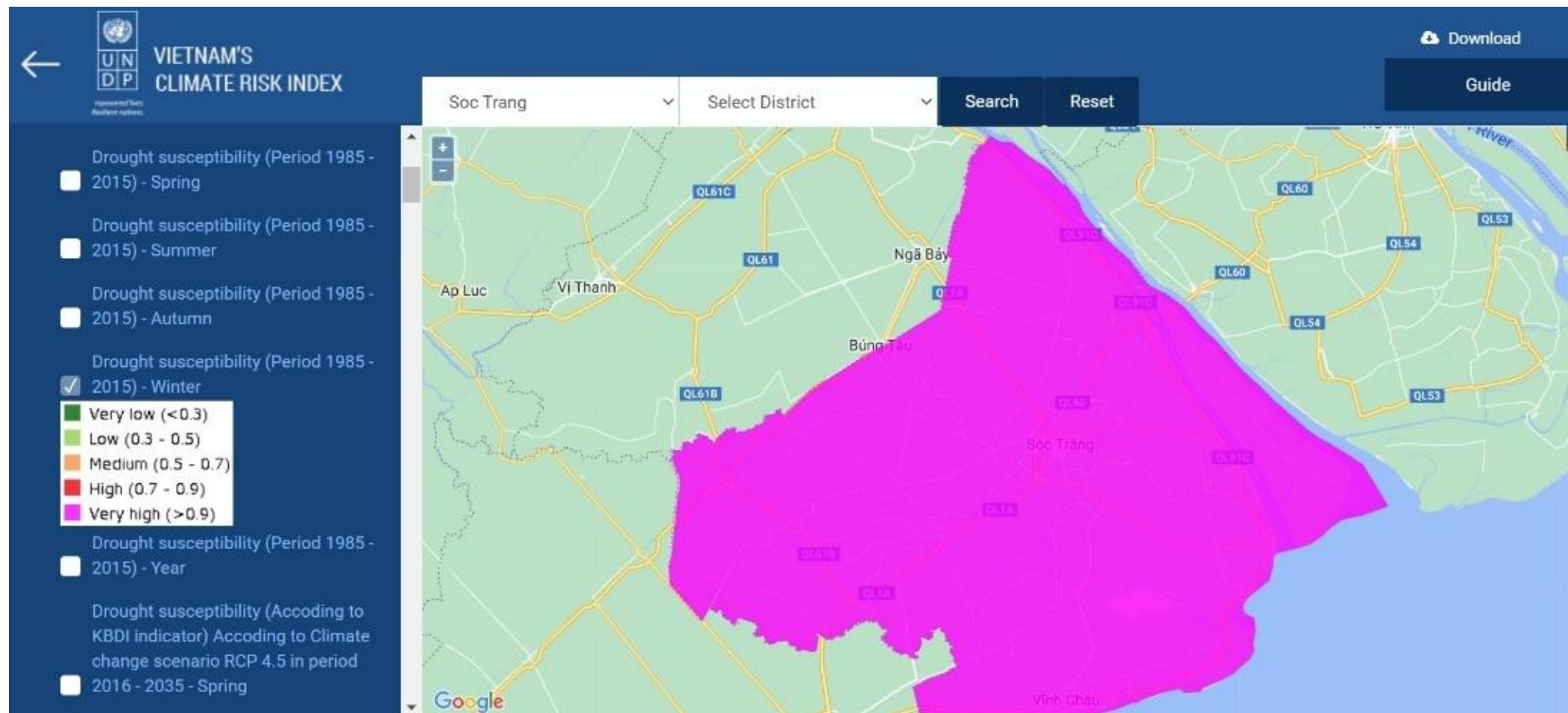
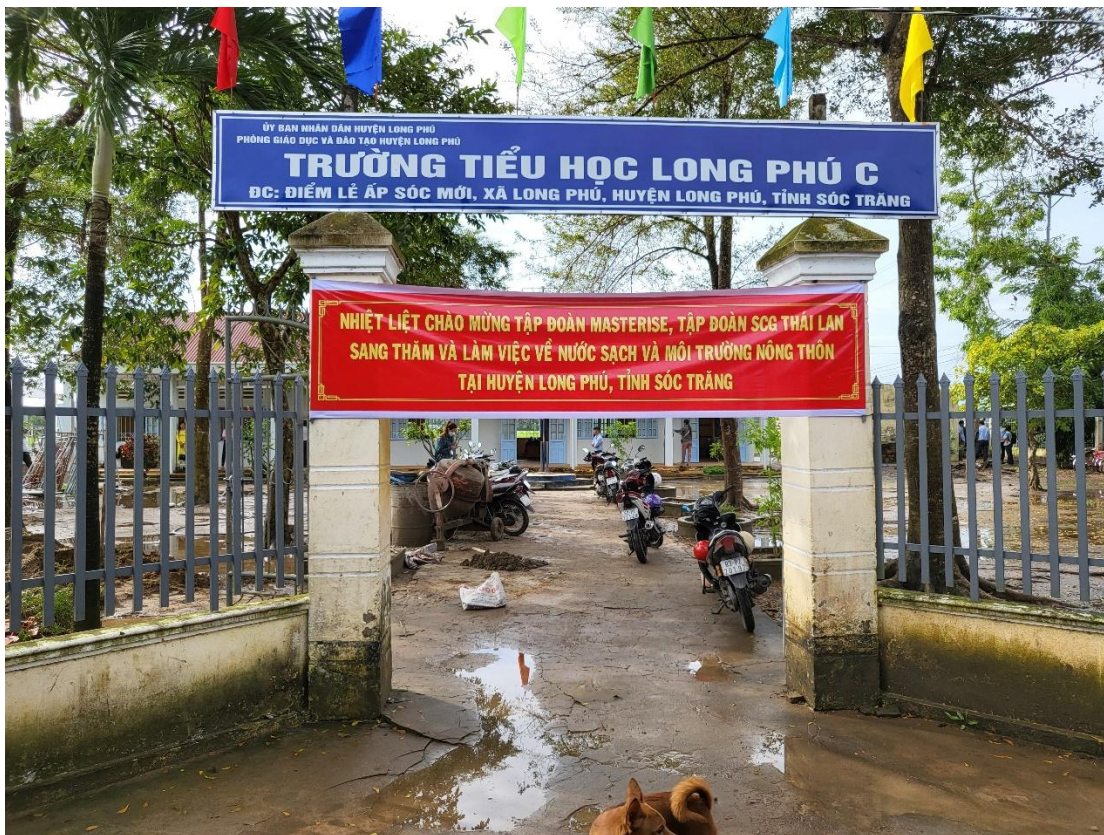


Figure: Drought and saltwater intrusion are the main hazards in Soc Trang Province regarding to Viet Nam's Climate Risk Index
[Maps | VIETNAM'S CLIMATE RISK INDEX \(undp.org.vn\)](https://maps.vietnamclimateindex.org/)

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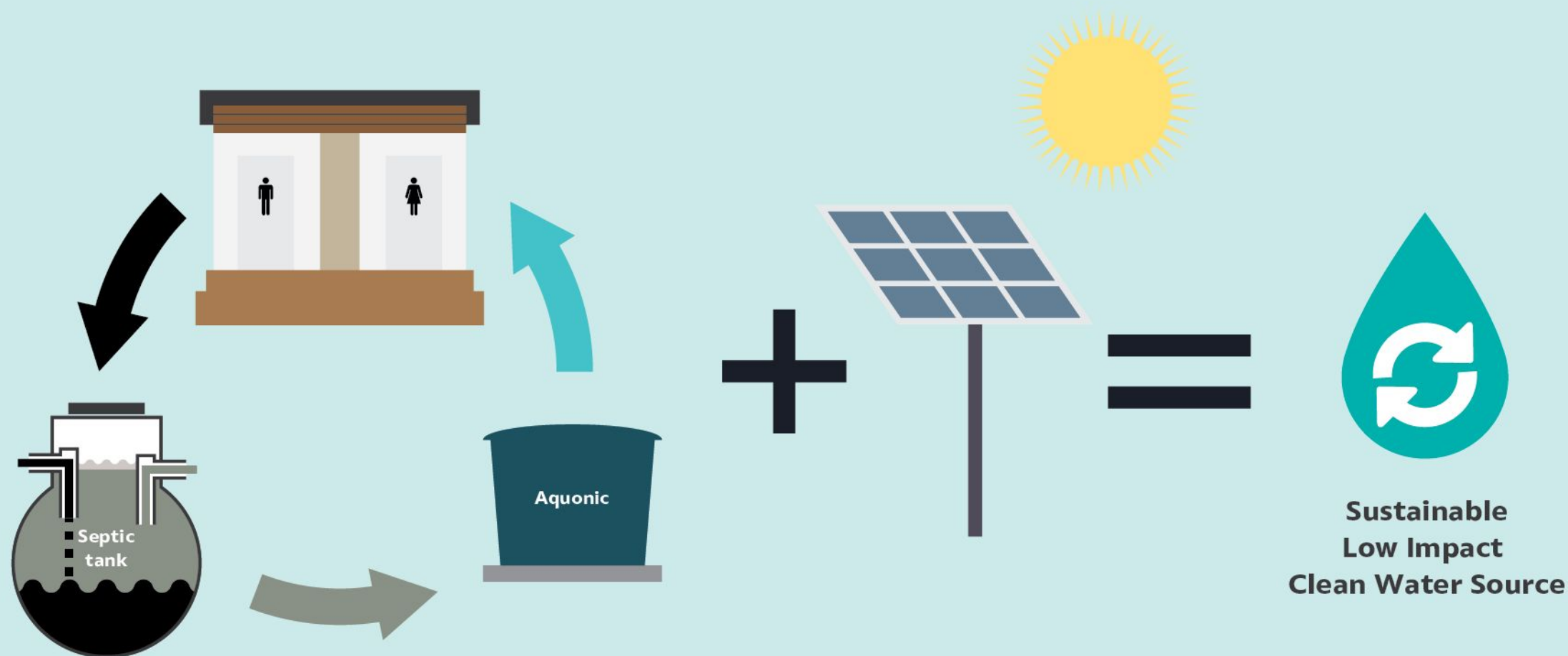


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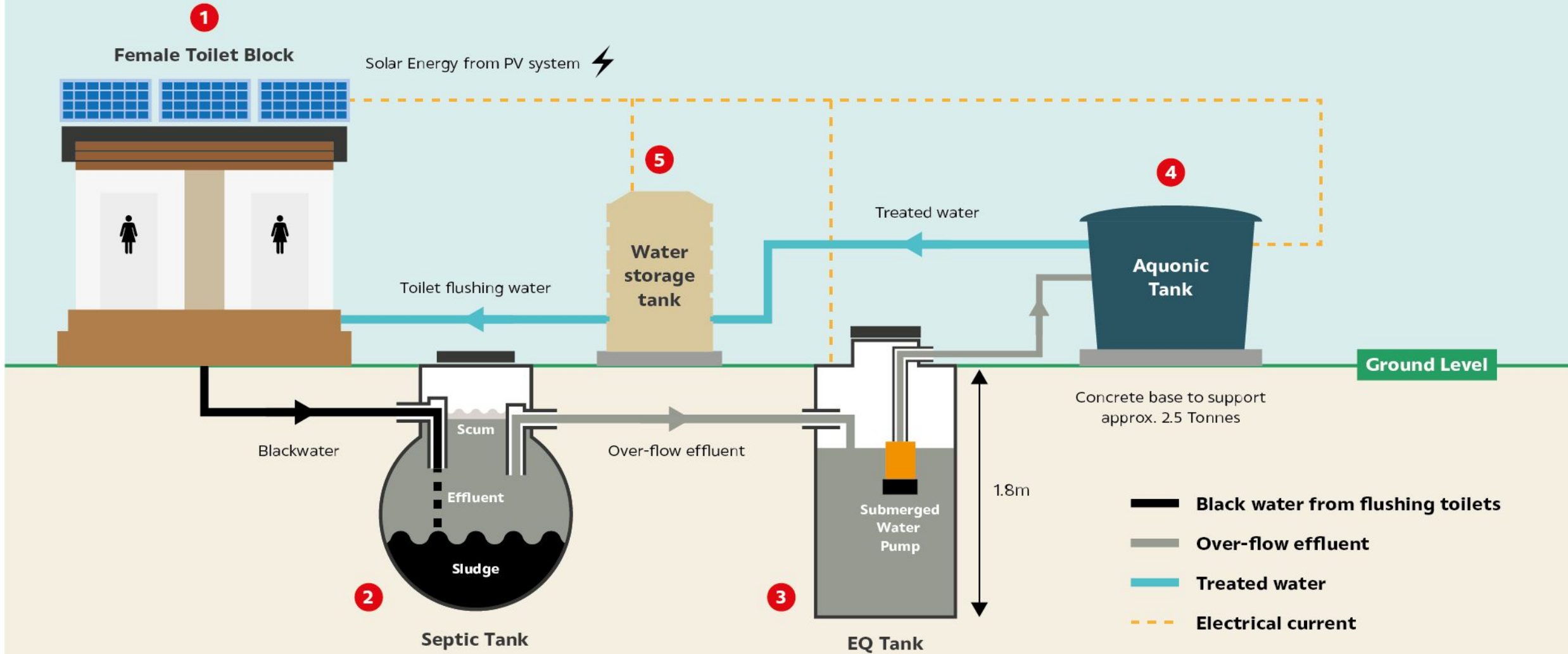


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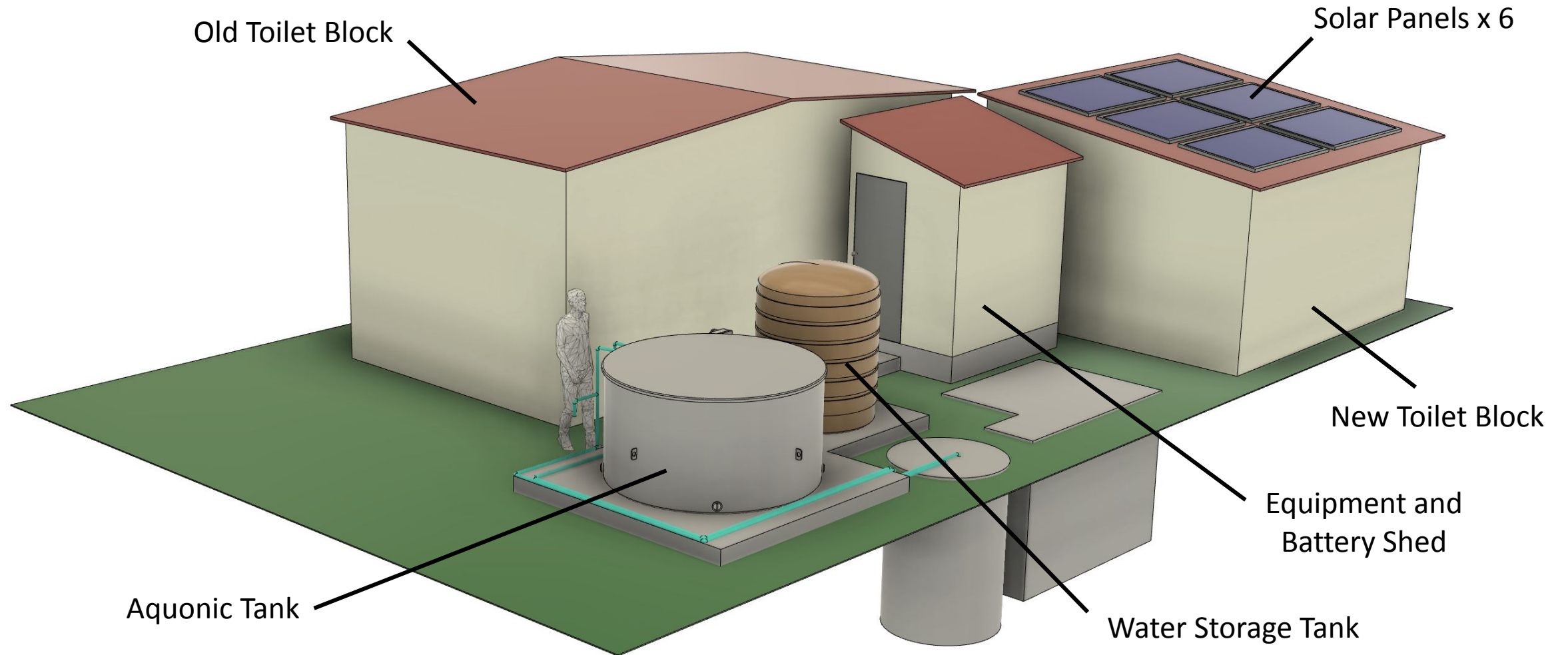
Project Objective: “Net-Zero Toilet”



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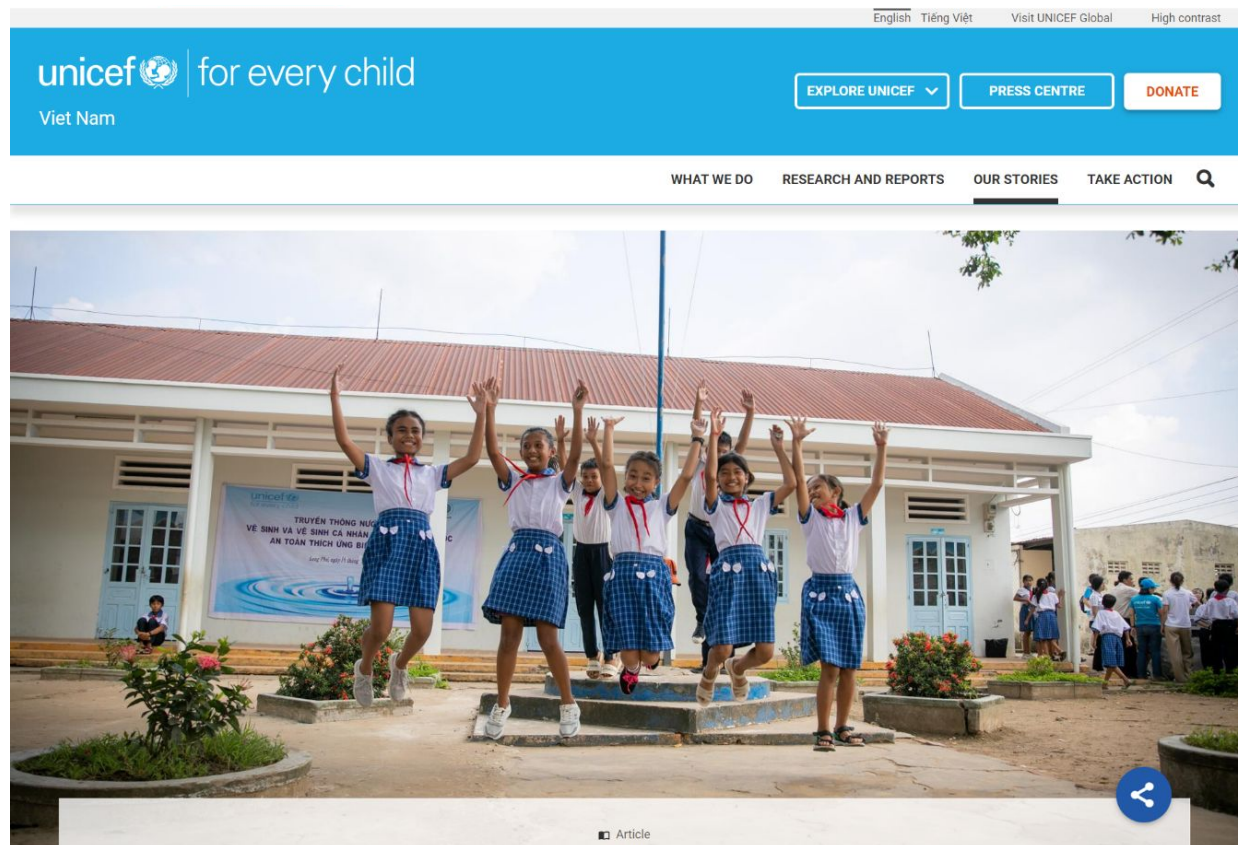
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Bringing innovative solutions to help children in Soc Trang

How children improve education through better access to clean water and sanitation in schools

Pham Thai Hong Van



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The first net-zero toilet device in Viet Nam, "Net Zero Aquonic," arrived at Long Phu C Primary School for installation. It represents a groundbreaking wastewater treatment system that harnesses clean energy from solar panels to turn wastewater into clean and germ-free water, which will be reused for flushing toilets.

How to Calculate Number of Required Aquonic

Basic idea - Calculate for the maximum generation of wastewater per site

Info required

- 1) Number of toilet cubicle – e.g. 5
- 2) Volume of the toilet flush or pour – e.g. 6L
- 3) Number of hours per day the toilet is open for use – e.g. 8h
- 4) Number of days per week the toilet is open for use – e.g. 5 days

Assumptions

1. Use assumption that 1 person use toilet for 10min and flushes twice
2. Use assumption that 1 x Aquonic can treat 1000L per day, 7 days per week

Example calculation

Max wastewater per day for 1 toilet cubicle
 $= 6L \times 2 \times 6 \times 8 = 576L$

Max wastewater for toilet block per week
 $= 576L \times 5 \text{ cubicle} = 2,880L \times 5 \text{ days} = 14,400$

Required Aquonic tanks =
 $14,400 \div 7 \text{ days} = 2,057L \text{ per day} \div 1000L = 2 \text{ Aquonic}$

Go Global
Act Local

