

# 6 CLEAN WATER AND SANITATION



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Without water we can't live. Water supports out agriculture and aquaculture. Clean water is vital. However, due to bad economics or poor infrastructure, millions of people including children die every year from diseases associated with inadequate water supply, sanitation and hygiene."

(THE Impact Rankings)



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## WATER CONSUMPTION PER PERSON

# ITS Supports Clean and Renewable Energy

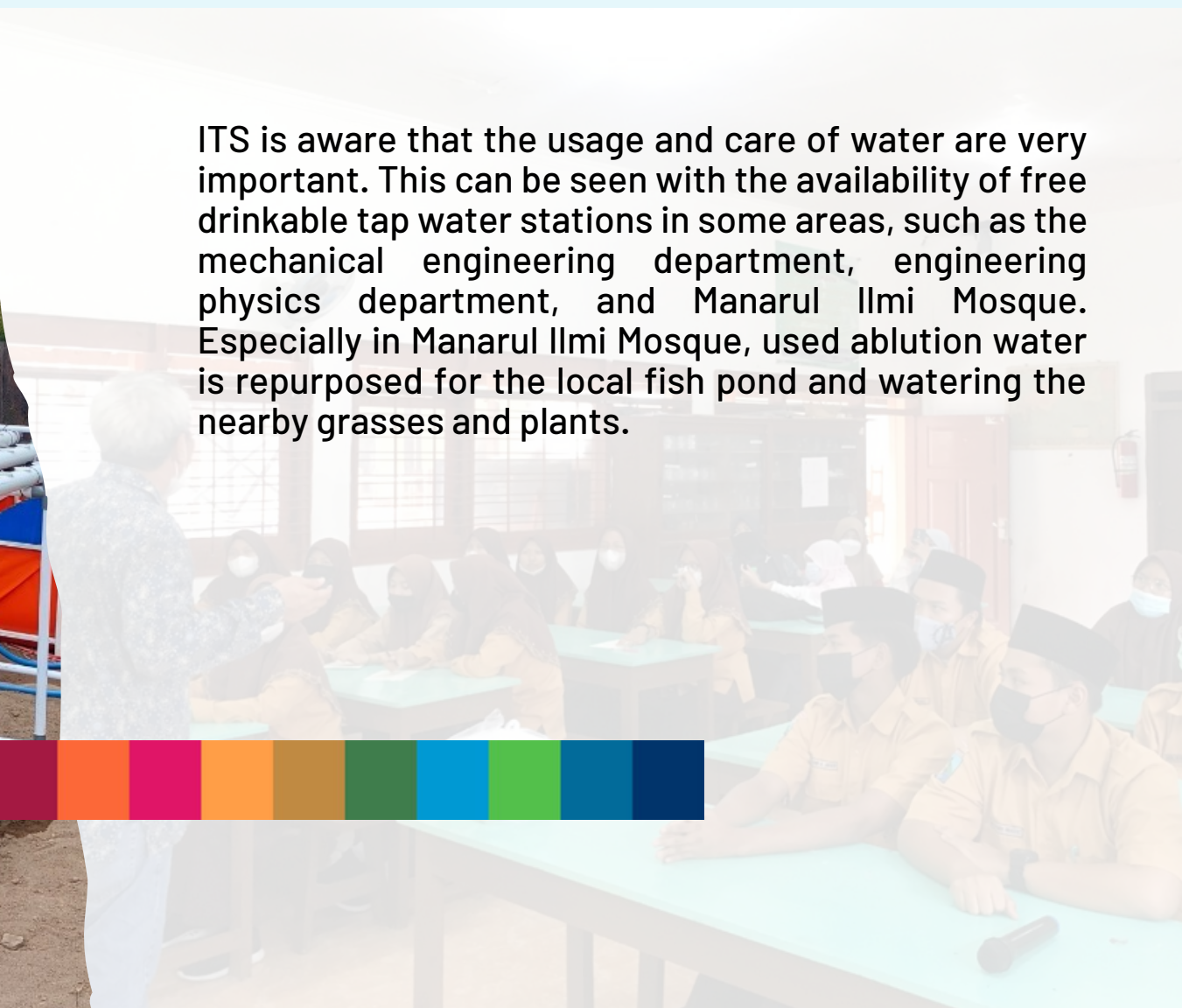
The increasing demand for electricity and limited access to electricity are two problems often faced by the community of Kalinegoro Village, Magelang Regency in Central Java. With the critical situation, ITS students from Product Design Department initiated the innovation of a waterwheel that produces electricity with renewable energy. The waterwheel can deliver 500 Watts of electricity and has an inverter with a capacity of 6000 Watts. This power input can operate 24 hours a day and provide electricity for three houses.



## WATER USAGE AND CARE

# ITS and Reuse of Water

ITS is aware that the usage and care of water are very important. This can be seen with the availability of free drinkable tap water stations in some areas, such as the mechanical engineering department, engineering physics department, and Manarul Ilimi Mosque. Especially in Manarul Ilimi Mosque, used ablution water is repurposed for the local fish pond and watering the nearby grasses and plants.



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### WATER REUSE

## Tracking of Water Usage in ITS

As water is very important, reusing water is one of the ways to reduce unnecessary water usage. In ITS, such a thing is tracked. The usage of dual-flush toilet is implemented in ITS, where two types of toilet flushes are used: the big flush, which uses approximately 6 - 9 liters of water, and the small flush, which uses approximately 3 - 4 liters of water. ITS also installed water sprinklers that use a system where water is used as efficiently as possible while still maximizing the area being watered by sprinkling the water with pressure.



### WATER IN THE COMMUNITY

## ITS & Educating the Locals of Water Usage



Various efforts have been done by ITS to educate and support the local communities on efficient usage of water. To name a few, an ITS community service group designed a water system in Al Khoiriyah Islamic Boarding School in Tulungagung district, where the used ablution water is collected, purified, and then used for a fish pond and hydroponic garden. Then, in Gresik district, another ITS community service group designed and built an Internet-of-Things-based device for the local salt farmers that check the salinity of the sea water. Finally, in Wirotaman village, Malang regency, another ITS community service group mapped the area for local water sources.

