

Overcoming Water Shortage in Islamic Boarding School

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Every day, about 80 students in Sunan Pandanaran Islamic boarding school use water for religious and everyday activities. However, this place often faces various problems related to water availability.

This problem is what made the five students of UGM, namely Aji Purnomo (Geography), Muhamad Lutfi S., Luthfi Afgani and Eka Fitriani (Maths and Natural Sciences), and Tia Nur A. (Agricultural Technology) to find creative ideas such as implementing a filtration system called Re-Sharia ablutions waste.

"The principle of this filtration system is to recycle the waste of ablutions for non-consumptive water use. Because ablutions waste is water waste that is not contaminated with chemicals, so it only needs simple filtration system," Lutfi said, Friday (17/6).

With the re-shar?a system, filtrate ablutions waste is reused for ablutions according to Islamic law, and can also be used for washing or bathing. In addition, they also build ablution place with higher water discharge to be channeled to the filtration system, so it is not wasted.

"The filtration system has been discovered and studied by several previous parties. However, we have to give some touches of innovation here, one of them by adding zeolite to absorb impurities and

various other substances in the waste so that it can help clear up the water," Aji said.

However, according to Aji, the system can still be applied in other places without zeolite. The materials to be used as filtration materials that can easily be found are zeolite, gravel, sand, charcoal, and coconut shells.

Not only installing a filtration, these students also tried to raise awareness of the students to care about environment by water saving. For the system to be sustained, they formed a management structure at the boarding school who will be responsible for treatment systems.

"If the filtration system can be applied continuously and provide effective benefits in addressing the problem of water shortage in this boarding school, it can also be applied in other locations especially places with a shortage of water," Aji said.

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