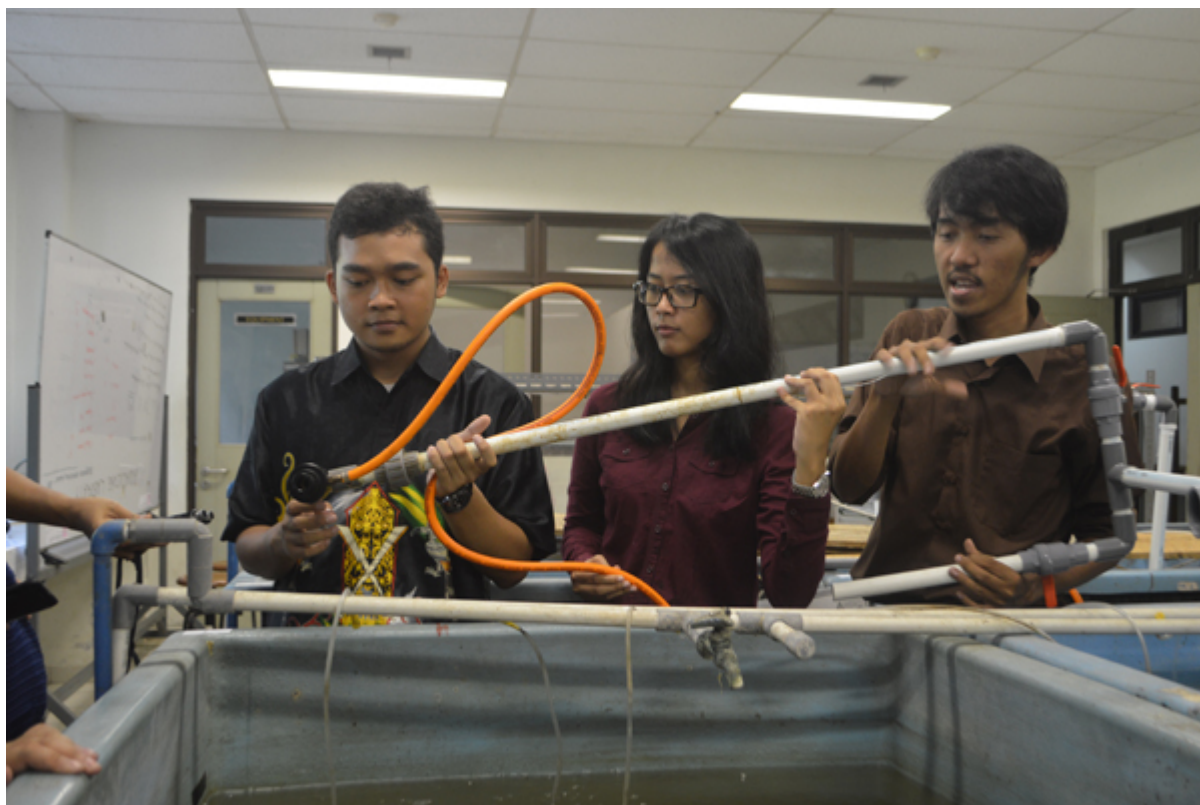


# UGM Students Develop Micro Bubble Generator to Improve Fish Production

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FAO ranked Indonesia among 10 world's fish producing countries. Fish farming cultivation contributes to 25 percent of total fish production. But since 2005 this sector has remained stagnant due to clean water problem.

The condition urged three students of UGM to make an innovation on clean water for fish cultivation. The students, Muhammad Nabil Satria Faradis and Fajar Sidik Abdullah - Mechanical Engineering students and Untarini Febrian Ramadhani, Management student, have developed the microbubble generator (MBG) technology. The research is being submitted to a competition held by USAID.

"The technology enables dissolved oxygen in water to increase due to the size of bubble which is much smaller than that produced from regular aerator," Nabil told journalists on Wednesday (4/5) at Aquaculture Lab, Fisheries Department, Faculty of Agriculture UGM.

Nabil explained the MBG was developed in a simple circuit, consisting of two components, pump and pipe. This can improve the quality of water in the pond, hence supporting fish growth. "The fish will get longer, heavier while the number of dead fish reduces," he said.



Fajar added the technology made the oxygen distribution better because bubbles can be produced from the bottom of the pond. “Tests showed that this technology application can improve water quality and distribute oxygen in the pond optimally. This can be applied to areas lacking in water,” he said.

The research has been done at the Aquaculture Lab, involving Mechanical and Industrial Department, Chemical Engineering Department, Fisheries Department, and Centre for Energy Studies UGM.

Untarini expected that the innovation would help increase production up to 50% annually, thus improving farmers’ prosperity.

“Currently, we’re improving this technology. We plan to use solar panel in the future for power generator as well as Android based app development to control the tool,” she said.

Head of Centre for Energy Studies also supervisor of the team, Dr. Deendarlianto, said the research was their first testing for fishery uses. The Centre is one of the pioneers and frontier knowledge of Microbubble research.

“The MGB currently is in the process for patent registration. It is planned to be produced in mass in the future to increase fish production,” he said.

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