

UGM Students Utilize Solar Energy for Aquaculture

Wednesday, 09 May 2012 WIB, By: Marwati

YOGYAKARTA - UGM Students who are members of the Student Creativity Program (SCP) for community services develop the utilization of solar energy for fisheries in Sendangsari Village in Minggir, Sleman regency. The dissemination of this applied technology is in the form of installation of 10 solar panels to supply electricity for aeration of carp and prawn breeding ponds.

To introduce this technology to fish farmers, four Engineering students provide training and technical assistance in operation and maintenance of solar cell technology to aquaculture farmers called Sembada Mina Mandiri.

Currently, energy provider system has already operated coming from 10 solar panels with a capacity of 1000 Wp, assisted by the Ministry of Research and Technology. "So far, they have been used for aeration for 10 breeding ponds, capable of supplying energy for lighting three lamps around the pool area," said Igib Prasetyaningsari, one member of the SCP on Friday (4/5).

Igib said the use of the aerator is intended to supply adequate oxygen to the pond so as to provide the best possibility for fish to live. "Aerator can also produce water movement which is usually preferred by the fish," the student majoring in Physics Engineering said.

Community empowerment program in using renewable energy according to Igib is to support fisheries. The free electricity will reduce production costs, including lighting and pond aeration. Thus, it is expected to improve the welfare of the community. "We want to provide inspiration, knowledge and concrete examples for the surrounding areas in using renewable energy technology to support their economic activities," she said.



Anwar Hadi, 35, head of the farmers group said to gain benefit from the installation of aeration for breeding ponds. It can reduce mortality of fish seeds before they reach 60-90 percent. Moreover, the lights placed around the pool area able to prevent the arrival of predators, such as bats.

Of the 10 breeding ponds sized 1x2 meters, each is capable of producing 2000-4000 fish for each harvest per 2 weeks. Fish seed is sold at 100 - 150 rupiah each. "It is still purchased by the farmer group members themselves who manage the pool area," Anwar said.

Anwar and three of his friends now knew how to care and maintain the solar panels in good condition. They not only routinely clean the panels, but also repair if there is any defective component. "The important thing is fish seed's quality. The quality determines the aquaculture outcome," Anwar said while fixing the cables.

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