

UGM Students Conserve Breksi Cliff with Biofungicide

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Special Region of Yogyakarta holds a huge tourism potential, including the natural beauty of Breksi Cliff Park or Breksi Cliff.

Although this geoheritage-based tourist attraction formed by tuff rocks continues to attract both domestic and international tourists, the cliff's condition has started to corrode and the color changes due to mosses and fungi. Such condition certainly lowers the place's aesthetic.

The declining cliff's condition needs a conservation to maintain the existence of Breksi Cliff. Then, some UGM students offered a solution to preserve the aesthetic value of Breksi Cliff by providing technical guidance of biofungicide application.

They are Nurlaili Rahmawati (Chemistry 2015), Budi Prasetyojaty (Geology 2016), Diah Ayu Puspitasari (Chemistry 2015), Durrotunafisah (Environmental Geography 2015), and Ilmi Fathu Muhammad (Geology 2015). The program was mentored by Drs. Iqmal Tahir, M.Si., Department of Chemistry teaching staff, Faculty of Engineering UGM.



Durrotunafisah explains that biofungicide is one formula to preserve the authenticity of Breksi Cliff from mosses and fungi. Biofungicide is used to improve control effectiveness, facilitate material preparation and application, as well as reduce the cost.

Materials for biofungicide can be easily found on the market, including cloves, lemongrass, ginger, and EM4 bacteria. The application of biofungicide is a new thing for Breksi Cliff's managers because they used the mechanical technique of sanding with sandpaper.

"Sanding is aimed to maintain the cliff's original color. However, this method is ineffective because mosses and fungi still grow and it gradually reduces the volume of Breksi Cliff from erosion. Meanwhile, the biofungicide application is suitable for this," said Durrotunafisah at UGM, Tuesday (7/17).

The series of technical guidance on biofungicide application started with program socialization on May 1, 2018. Training on the making of biofungicide for conservation technicians at Breksi Cliff was done on June 7, 2019.

Next, biofungicide was applied on June 21, 2018. The initial assessment of biofungicide done on June 30, 2018, showed that the application naturally peeled mosses and fungi while preserving the original color.

"The technical guidance program was successful and we are grateful that Higher Learning Directorate General awarded us with grants from the Student Creativity Program for Community Service."

This program is continuously implemented at Breksi Cliff Park in Sambirejo Village, Prambanan, Sleman. It receives positive responses from the managers and they have been able to make biofungicide themselves.

"In addition, the program formed the Quality Assurance Division of Breksi Cliff that is responsible to coordinate the Breksi Cliff conservation using biofungicide."

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