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## Research article

# *Azolla Pinnata* as Phytoremediation Agent of Iron (Fe) in Ex Sand Mining Waters

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**Abstract** Phytoremediation is one effective method used for reducing the iron (Fe) from waters. *Azolla pinnata* is a plant that has potential as an agent of phytoremediation of Fe in waters. This study aims to verify the ability of *Azolla pinnata* to reduce Fe from sand excavated water in Pasir Sakti District, East Lampung Regency, Indonesia. The study was conducted with three treatments. The treatments of 25% cover area, 50% cover area, and 75% cover of *Azolla pinnata*, with three replications each. The experiments were carried out until the water quality became suitable for aquaculture. The results showed that the area cover of *Azolla pinnata* had a different effect ( $P < 0.05$ ) on the decrease in iron concentration in the water. The treatment with 75% cover area of *Azolla pinnata*, showed a reduction percentage of iron concentration of 98.10%. It is the most significant reduction percentage of iron. Whereas the treatment with 25% and 50% *Azolla pinnata* cover area of succeeded in reducing the concentration of Fe in water 92.5% and 93.3% respectively.

**Keywords:** Aquaculture, Iron, Phytoremediation, Removal efficiency

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