# CORRELATION ANALYSIS BETWEEN SEAWATER INTRUSION AND MANGROVE GREENBELT

| | |
|---|---|
| **Title** | CORRELATION ANALYSIS BETWEEN SEAWATER INTRUSION AND MANGROVE GREENBELT |
| **Author Order** | 1 of 4 |
| **Accreditation** | 1 |
| **Abstract** | Seawater intrusion is an entry process ofÃƒÂ,Ã,Â  seawater to land. Many factors have caused seawater intrusion from freshwater exploitation until mangrove degradation.ÃƒÂ,Ã,Â  Mangrove ecosystem is a type ofÃƒÂ,Ã,Â  forest ecosystem which has an ability to reduce seawater intrusion. This paper analyzes the estimation ÃƒÂ,Ã,Â and prediction ofÃƒÂ,Ã,Â  seawater intrusion and correlation between widths ofÃƒÂ,Ã,Â  mangrove with seawater intrusion.ÃƒÂ,Ã,Â ÃƒÂ,Ã,Â  The relation analysis between the width ofÃƒÂ,Ã,Â  mangrove greenbelt with seawater intrusion used an equation model to predict seawater intrusion. The research method used sampling technique, system analysis with powersim software, correlation analysis and mathematical method with trend line analysis. Results show that (1) the mangrove density in the coastal area is approximately 50 ÃƒÂ¢Ã¢Â‚Â¬Ã¢Â€Âœ 109 trees/ha. (2) Simulation results showed seawater intrusion rate was about 0.20 km year (with mangrove as a component system), but reached 0.3 ÃƒÂ¢Ã¢Â‚Â¬Ã¢Â€Âœ 0.4 km/year (without mangrove as a component system). (3) The simulation result also showed that freshwater salinity was estimated to increase from 1.92 ppt to 4.86 ppt. (4) The relation model between seawater intrusion and mangrove greenbelt showed that correlation coefficient was 0.97 withÃƒÂ,Ã,Â  the equationÃƒÂ,Ã,Â  seawater intrusion (m) = 2264.9 * exp (-0.009 * the width ofÃƒÂ,Ã,Â  mangrove greenbelt (m)), the correlation ofÃƒÂ,Ã,Â  mangrove width with seawater intrusion was 0.97. (5) Avicennia marina, Avicennia alba, Rhizophora styllosa, Sonneratia alba and Sonneratia caseolaris were the mangrove species that had the best ability to reduce seawater intrusion. |
| **Publisher Name** | Secretariat of Forestry Research and Development Agency |
| **Publish Date** | 2017-10-31 |
| **Publish Year** | 2017 |
| **Doi** | DOI: 10.20886/ijfr.2017.4.2.151-168 |
| **Citation** | 2 |
| **Source** | Indonesian Journal of Forestry Research |
| **Source Issue** | Vol 4, No 2 (2017): Indonesian Journal of Forestry Research |
| **Source Page** | 151-168 |
| **Url** | http://ejournal.forda-mof.org/ejournal-litbang/index.php/IJFR/article/downloadSuppFile/1800/107 |
| **Author** | Dr ENDANG HILMI, S.Hut, M.Si |