

# **SenSoRam, a sensor innovation to measure salt content in the air by the electrical conductivity method for an early warning system on Indonesia beaches agricultural land.**

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## **ABSTRACT**

Rapid increase in the number of people along with the increasing needs of food make the demand for agricultural land becomes increasingly urgent. Therefore, the use of coastal land which has a wide area for agriculture is the right way to meet the needs of agricultural land in Indonesia. However, the condition of coastal land including porous marginal land and the high salt content in the air require an innovation, particularly related to salt content.

In this study, measurement of salt level in the air is done with salinity sensor innovation which is based on EC (electrical conductivity) method by making the connection between salt concentrations and voltages caught in the trap of salt with time. In addition, the calibration is done in the Laboratory of Land and Water Resources Technique using the voltage data and the concentration of salt from data logger, so that the salt content in the air can be quantified.

The results of measurements with SenSoRam, a sensor innovation to measure salt content in the air by the electrical conductivity method, is expected to be a new way to measure the value of airborne salinity. The information will be used for early warning irrigation system which is an early warning system for irrigation by farmers in local beaches agricultural land. This will be useful for water savings, given the availability of fresh water in coastal areas is limited. Make eco- friendly agricultural system for for the welfare of the large of society and a environmental sustainability.

Keywords: air salinity, sensor of salinity, EC, voltage and the concentration of salt, early warning irrigation system