

# **DETERMINING THE CRITERIA FOR ASSESSING THE MODELS OF RICE PRODUCTION TOWARDS CLIMATE SMART AGRICULTURE (CSA) IN THE MEKONG DELTA**

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## **ABSTRACT**

*Climate Smart Agriculture (CSA) has been formed and developed in Mekong Delta, Vietnam. However, selecting the potential and suitable farming models for rice cultivation in each specific context of the region that should be based on what criteria is the issue. This research was conducted to identify criteria for assessing and to choose suitable rice production models towards CSA for each area in the Mekong Delta. By research methodologies such as data collection, household surveys, statistics, analysis, Multi-criteria Evaluation (MCE) and GIS technology, the results have been achieved: there are seven basic criteria of CSA for rice in the Mekong Delta, including reduce the number of seeds and use higher quality seeds than traditional rice cultivation; Increase productivity per unit of area; increase income per unit of area; increase economic efficiency; there is impact of natural resource recovery (use of organic fertilizer to increase soil fertility); reduce the amount of inorganic fertilizer, reduce the number of spraying plant protection products; reduce greenhouse gas emissions compared to conventional rice cultivation. Besides, the study also identified four models of rice cultivation which are suitable to four different ecological zones in the Mekong Delta. These results are the bases for local to make more suitable and detailed plans for rice production toward CSA in the future.*

# **APPLICATION REMOTE SENSING DATA FOR FLOODING DETECTION AND MANAGEMENT IN LAGOON AREA: CASE STUDY IN QUANG DIEN DISTRICT, THUA THIEN HUE PROVINCE**

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## **ABSTRACT**

*The lagoon region of Quang Dien district has the low-lying terrain and is frequently facing with severe flooding for many years. As a result, there are many negative influences effect to living conditions of local people as well as for land use situation. This study indicated the flooded area by some indicators such as Land Surface Water Index (LSWI), Enhanced Vegetation Index (EVI) and Difference Index (DVEL) from Sentinel 2 images. The results show the flooded area of Quang Dien district in the year of 2017 is 4929.16 hectares and the deepest flooding was in September and November. The most affected communes included Quang An, Quang Phuoc, and Quang Thanh. In terms of land use, paddy land type is most affected followed by annual cropland and aquaculture land.*