

# **APPLYING PARTICIPATORY GIS METHOD TO SIMULATE THE EFFECTS OF CLIMATE CHANGE ON AGRICULTURAL PRODUCTION IN BAC TRA MY DISTRICT, QUANG NAM PROVINCE**

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## **Summary**

This study is conducted to simulate the effects of climate change (CC) on agricultural production in Bac Tra My district, which is one of the most difficult mountainous areas of Quang Nam province. In the study, the participatory GIS method together focus group discussion and in - depth interview methods were applied to build “simulation maps of the effects of climate change on agricultural production”. The results showed that there are 4 types of natural disasters that seriously affect agricultural production in Bac Tra My district including drought, landslides, cyclones and flash floods. For each type of natural disaster, research has developed maps to identify the impact of climate change on agricultural production at 3 levels: large, medium and low impact. By this method, the study has identified specific areas that will be affected by natural disasters at different levels. At the same time, the study also found that there are two specific land uses that are vulnerable to natural disasters, including forestland (mainly acacia plantation) and perennial crop land. These results are a scientific reference source to support policy makers in decision making in the process of building climate change scenarios as well as planning local socio-economic development.

**Keywords:** *Climate change, land use, simulation, participatory GIS method, agricultural production.*