

## **Risk and Vulnerability Assessment of Agriculture on Climate Change: Bangnampriao District, Thailand**

**Authors :** Charuvan Kasemsap

**Abstract :** This research was studied in Bangnampriao District, Chachernsao Province, Thailand. The primary data relating to flooding, drought, and saline intrusion problem on agriculture were collected by surveying, focus group, and in-depth interview with agricultural officers, technical officers of irrigation department, and local government leader of Bangnampriao District. The likelihood and consequence of risk were determined the risk index by risk assessment matrix. In addition, the risk index and the total coping capacity scores were investigated the vulnerability index by vulnerability matrix. It was found that the high-risk drought and saline intrusion was dramatically along Bang Pakong River owing to the end destination of Chao Phraya Irrigation system of Central Thailand. This leads yearly the damage of rice paddy, mango tree, orchard, and fish pond. Therefore, some agriculture avoids rice growing during January to May, and also pumps fresh water from a canal into individual storage pond. However, Bangnampriao District will be strongly affected by the impacts of climate change. Monthly precipitations are expected to decrease in number; dry seasons are expected to be more in number and longer in duration. Thus, the risk and vulnerability of agriculture are also increasing. Adaptation strategies need to be put in place in order to enhance the resilience of the agriculture.

**Keywords :** agriculture, bangnampriao, climate change, risk assessment

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