



Title: Climate change and adaptive capacity of rice farmers in the Mekong Delta, Vietnam

Lam Nguyen and Ngan Collins

School of Management, RMIT University, Australia

Abstract:

Climate change is a global issue that impacts upon both the environment and human beings. The effect of climate change has been on various regions across the world. Agriculture is one of most important sectors of the global economy. Agricultural production, especially rice production is however very sensitive to changes in climatic conditions. Projections on future climate conditions imply a possibility of future issue in food security due to the reduction of productivity of several important crops across various locations.

Even though Mekong Delta in Vietnam has been known as one of the highest rice producers in the world, it is also considered as one of the world most vulnerable countries to the climate change (Weiss, 2009). Mekong Delta is one of top five most vulnerable areas to climate change in Southeast Asia (Yusuf and Francisco, 2010; Ipcc 2014). The farmers, especially rice farmers of this region have experienced the problems of irregular and severe weather events, floods, drought and salinity intrusion (CGIAR, 2016). Nevertheless, the farmers have overcome the climate-related issues to increase the rice production of the region. Thus, the study investigates the ability of rice farmer households in the most affected area to salinity intrusion – Kien Giang and Tra Vinh province in order to answer the question: *to what extent do farmers in the Mekong Delta have the capacity to adapt successfully to climate change.* The research design will deploy the concept of adaptive capacity with reference to key factors such as availability of economic resources, human resources, social capital, technology, infrastructure and institutions. In order to get a rich picture of farmers' ability, the study applies a mixed method approach including qualitative and quantitative research. The study is conducted in three steps including focus groups discussion, survey and in-depth interview. The sample size of the study is 395 rice farmer households in which 200 farmers are from Tra Vinh province and the rest are from Kien Giang province. The analytic hierarchy process (AHP) technique is applied to calculate the adaptive capacity level of rice farmer households. The results of the study confirm the effect of climate change in the two provinces with the severe salinity intrusion in 2016. The incidence affected hundreds of thousands of rice land and households. Results show that the adaptive capacity is influenced by technology, economic resources, infrastructure and social capital. Besides, the study also found out that the government is essential to rice production

and the adaptive capacity of rice farmer households. The contributions of the study include for theoretical and practical aspects as follow: (1) To theories: the study provides comprehensive research into adaptive capacities under climate change in one of the major affected areas, Mekong Delta focusing on rice production sector through a new research approach has not been done in previous studies. The study will contribute to human resource development theories on demanding of training and development which comes from external pressure of climate change for farmers. (2) To practitioners: the study provides in-depth knowledge for policymakers to develop more suitable support policies to farmers in Mekong Delta in term of training and develop as well as a comprehensive understanding about key factors impact on farmer adaptation to climate change. It also helps farmers to have awareness about factors that most effect on their capacity of learning a new skill to improve their day-to-day farming activities.

Keywords: adaptive capacity, rice production, Mekong Delta, climate change, human resources

Biographies:

Mr. Lam Nguyen is a PhD candidature in the School of Management, RMIT University, Australia. His earned his MSc. International Economic Development in Czech University of Life Sciences, Prague, Czech Republic. Mr. Nguyen was researching and teaching on farming, agricultural and climate change in Mekong Delta in Department of Agricultural Economics – College of Economics, Can Tho University before conducting his PhD in this topic with RMIT university.

Associate Professor Ngan Collins is an international researcher in Asian human resource management. She earned her PhD thesis from the Melbourne university, Australia in 2005. Currently Ngan Collins is Academic director, the Executive Education program for Human source management in the School of management, RMIT university. She has published widely in many topics of international HRM, employment relations, and impact of climate change on human resource development in Vietnam. Her author books '*Economic reform and employment relations in Vietnam*' (Routledge 2009) and '*Business leaders and leadership in Asia*' (Routledge 2018) are widely used by international institutes and organisations for teaching and research.

Presenting author details
Full name: Ngan Collins
Contact number: +61 399251312
Twitter account:
Linked In account: https://www.linkedin.com/feed/?trk=guest_homepage-basic_sign-in-submit

Session name/ number:11 – substantiality and climate change