Factors Influencing Farmers' Adaptation to Climate-Induced Water Risks in Rice Cultivation: A Comparative Social-Psychological Study between Kratie, Cambodia and Nagasaki, Japan

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ABSTRACT

While the escalating water risks associated with climate change make promoting adaptation behaviors in rice cultivation urgent, cross-regional comparisons of the psychological factors underlying farmers' decision-making remain insufficient. Using Protection Motivation Theory (PMT) from social psychology as a framework, this study aims to clarify and compare the determinants of implementing and accepting adaptation behaviors (water-saving technologies, crop variety changes, and farm pond management) among rice farmers in Kratie, Cambodia (a developing country) and Nagasaki, Japan (a developed country). Through a questionnaire survey, risk perception and self-efficacy were quantified. Furthermore, the impact of expectations regarding "external support"—such as government subsidies in Nagasaki and foreign aid in Kratie—on voluntary community-based adaptation (dependency and social dilemmas) was analyzed. The results revealed that in Cambodia, farmers rely excessively on external support when it is anticipated; however, when it is not, they perceive community-based mutual aid as their only viable option. Conversely, in Japan, while expectations for technologies are high, farmers intend to take action primarily if government subsidies are available due to financial constraints. In conclusion, although a strong reliance on external support is a commonality, farmers in Cambodia (a developing country) exhibit a higher willingness to engage in community-based adaptation.

Keywords: Climate Change Adaptation/ Protection Motivation Theory (PMT)/ External Support/ Comparative Study