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Farmers’ adaptation behaviour to climate change: The case of central Colombia

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Abstract

Some of the effects of climate change on the agricultural sector include changes in weather patterns, changes in land suitable for specific crops, water availability as well as changes in yields, among others. The literature on farmer adaptive behaviour has been increasing in recent years; however, this area has been little studied in Latin American countries. To fill this knowledge gap, twelve villages were visited in the central region of Colombia; In four out of these 12 villages three or more landslides had occurred, in four other villages two or more droughts had been experienced, and in the last four neither of these two climatic emergencies had occurred. A total of 360 farmers were visited and a lab-in-the-field was conducted. Simulating a radio broadcast, half of the farmers received information about climate change, how it affects the agricultural sector, and what is forecast for this region. Based on the protection motivation theory, farmers’ perceptions of their vulnerability, the severity of climate change, and the costs of adaptation were measured, as well as their psychological distance.

Using four common agricultural adaptation measures in the region (protection of water sources, agroforestry or agrosilvopastoral practices, soil cover, and retaining walls) and three monetary measures (diversifying off-farm income, borrowing money from a financial institution or buying some type of insurance, and borrowing money from a relative, friend or neighbour), farmers’ perceptions of the effectiveness of these measures as a form of adaptation, their self-efficacy in practicing them, and their intention to use them were measured. This study is expected to find that farmers’ experiences with climate emergencies (landslides and droughts) will reduce their psychological distance to climate change. Likewise, it is expected that access to information will have an effect on their perception of severity and vulnerability and will influence their intention to adapt.

Keywords: Adaptation behaviour, climate change, Colombia, farmers