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Analyzing the changing morphology of the lower Abra River and the adaptations of the deltaic community of Santa, Ilocos Sur: a geo-historical perspective

ABSTRACT

The role of the Abra River Basin as a major water source in the northwestern portion of the country allows primary sector activities to prosper in the region. The river served as transportation and trading route of various goods and services from the pre-colonial times until the present, allowing settlements along the river to thrive as ports-entrepôts. In spite of these benefits, the heavy rains brought by typhoons entering the Philippine Area of Responsibility (PAR) annually, set off flooding in the areas surrounding the Abra River. Geomorphological processes acting on fluvial systems and the rise of water levels contribute to the rivers shifting off course, causing subsequent changes to the morphology. Data on historical flooding events suggest that major flooding occurrences affect towns along the lower Abra River, particularly the old deltaic town of Santa, Ilocos Sur which changed the location of their town center at least three times in the past. Flooding has caused considerable damage to lives and properties, enabling communities to seek adaptive measures if they are to remain in the area. With these in mind, the study will look into the changing morphology of the lower Abra River, and how consequent flooding events have impacted the deltaic community of Santa, Ilocos Sur. The study will further investigate how the community has adapted to these morphological changes and flooding hazards. The specific objectives are: (1) to investigate the historical flooding events in Santa, Ilocos Sur; (2) to examine how the spatial extent of the morphology of the lower Abra River has changed through time; and (3) to analyze the adaptations of the community to these changes. The study will serve as an exploratory research on community adaptation to flooding hazards from a geo-historical perspective, with emphasis on societies adjusting to natural processes and not aggravating the landscape.

Keywords: *Abra River, deltaic community, river morphology, historical flooding adaptation*