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Holocene evolution of the monsoon in Southeast Asia

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The Asian Monsoon has an important role in the global water cycle and is critical to the transfer of energy between low and mid-latitudes. Changes in Asian monsoon strength and timing can result in devastating droughts or floods, causing widespread crop failures and famine. However, while the range of past variability in the East Asian and Indian monsoon systems is reasonable well understood, the long-term behaviour of the Southeast Asian monsoon remains largely unknown, although important recent advances have been made through tree-ring and speleothem studies. Here we present an absolutely-dated paleo-monsoon record using speleothems from northern Laos and evaluate the range of Holocene monsoon variability in Southeast Asia on both short (decadal to centennial) and long (millennial) timescales. We compare our reconstruction with similar records from the East Asian monsoon region and discuss similarities and differences among these records.