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Storage and transport of particulate organic matter in tropical headwater streams with different catchment land use

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Allochthonous organic matter is an important source of energy, nutrients and habitat for aquatic communities in headwater streams. Organic matter inputs, storage and transport determine the availability of this resource for aquatic organisms. These processes are related to characteristics of the catchment and riparian vegetation. We assessed coarse particulate organic matter (CPOM) storage and transport, and fine particulate organic matter (FPOM) transport, in eight streams that differ in the land use of their catchments (forest, agriculture, secondary vegetation). Streams draining catchments with greater forest cover (63-100% forest cover) had higher CPOM storage (341.5-1107.4 g•m-2) than streams with more disturbed catchments (89.9-335.2 g•m-2). CPOM and FPOM transport showed no relationship with land use, but were positively related to discharge. Factors such as slope, or discharge could be modulating CPOM and FPOM transport, and masking the effects of land cover on CPOM and FPOM transport.