

**Riparian buffers in tropical agriculture: Scientific support, effectiveness and
directions for policy**

ABSTRACT

1. There is a weak evidence base supporting the effective management of riparian ecosystems within tropical agriculture. Policies to protect riparian buffers—strips of non-cultivated land alongside waterways—are vague and vary greatly between countries.
2. From a rapid evidence appraisal, we find that riparian buffers are beneficial to hydrology, water quality, biodiversity and some ecosystem functions in tropical landscapes. However, effects on connectivity, carbon storage and emissions reduction remain understudied. Riparian functions are mediated by buffer width and habitat quality, but explicit threshold recommendations are rare.
3. *Policy implications* . A one-size fits all width criterion, commonly applied, will be insufficient to provide all riparian functions in all circumstances. Context-specific guidelines for allocating, restoring and managing riparian buffers are necessary to minimise continued degradation of biodiversity and ecosystem functioning in tropical agriculture.