

Land use change in highland area and its impact on river water quality: a review of case studies in Malaysia

ABSTRACT

The policy of encouraging agriculture and development for mass tourism has led to environmental problems in Cameron Highlands, Malaysia. Rampant development and land clearing have significantly altered the land cover of Cameron Highlands for the past 30 years. Sensitive highlands areas are prone to landslides and soil erosion which then contributed to the main water pollution issues in the network of river system, sedimentation and siltation. The continuous trend of river water quality deterioration in Cameron Highlands has raised the issues for discussion in this review article. The purpose of this review is to briefly summarize the land use change, agriculture practices, agro-tourism, and agriculture policy and management toward water quality of the river system network in Cameron Highlands specifically in the downtown where most of the development and agriculture activities are concentrated. A rigorous review has been done on the existing literature to determine the relationship between land use change and agriculture practices toward river water quality in Cameron Highlands from 2001 to 2017. The total number of reviewed papers was 68. The outcomes established from previous researchers have highlighted factors such as soil erosion, landslides, agriculture activities, urbanization, and unplanned development associated with land use change have significantly influenced the river water quality in the highland areas. Continuous land use changes without proper development plan and law enforcement may critically threaten the sustainability of river network in the highlands area.

Keyword : Agriculture; River water quality; Highlands; Land use; Soil erosion; Cameron Highlands