

The impact of oil palm plantations on soil nutrient translocation to riparian buffer strips and rivers

ABSTRACT

The role of riparian buffer strips between rivers and oil palm plantations is to reduce nutrient and sediment flow into the rivers, and thereby safeguard the high river water quality needed to maintain aquatic biodiversity. Runoff and leaching of fertiliser and herbicides routinely used in oil palm management will accumulate in properly working riparian buffer strips, leading to raised concentrations of N,P,K and micronutrients. In particular increased concentrations of soil nitrogen are of concern, as this will increase emissions of the greenhouse gas nitrous oxide, and may lead to eutrophication of the buffer strips and rivers.