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**Detection of Water and Nutrient Pathways in a Small Catchment
— the Tai Region Project on Hydrology**

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Abstract

The Tai Region Project on Hydrology is financed by the DFG/BMZ and was initiated in 2001. It is an active cooperation between the University of Cocody-Abidjan (Centre Universitaire des Recherches et d'Application en Télédétection, CURAT — Côte d'Ivoire) and the Georg-August-University of Göttingen (Landscape Ecology — Germany). The interdisciplinary working group consists of Ivorian and German scientists, students and local collaborators.

The investigation site is located on the eastern border of the Tai National Park in Western Côte d'Ivoire (5°50'N/7°10'W). Within the main research area (covering an area of 1 km²) the Hana river enters the National Park after length of 8.5 km. The part of the watershed covers an area of approximately 60 km². Cocoa plantations mostly older than 15 to 20 years are dominating the land use followed by coffee, hevea and the small farmholder's crops like maize, rice, yams and tarot, etc. To guarantee sufficient yield profits despite the old age of most cash crop plantations the intensified application of fertilizers and pesticides is obligatory.

It is the aim of the Tai Region Project on Hydrology to determine agricultural influences on the water and nutrient cycle within the small catchment as well as to identify the transport pathways. As they represent the dominating cultures within the catchment area two cocoa plantations (7 and more than 20 years respectively) as well as one forest site within the National Park have been selected and equipped with sampling units on bulk-deposition, soil water and groundwater. At each site a soil profile has been recorded. Pluviometers for the quantification of daily precipitation have been installed at two nearby fallow stations. Additional basic data are acquired by land use classification based on satellite images and interviewing the local farmholders concerning the application of agrochemicals. Furthermore, an attempt is made to develop an innovative method based on physical and chemical parameters to assess water quality of tropical rivers.

Keywords: Côte d'Ivoire, implementation of agrochemicals, land use classification, soil, water and nutrient pathways, water quality