Geophysical Research Abstracts
Vol. 12, EGU2010-9124-1, 2010
EGU General Assembly 2010

SUGAR CANE GROWING AND CATTLE GRAZING AS DRIVERS TO WETLAND DEGRADATION IN UGANDA: A case of upper river Ruizi and Iguluibi catchments Lake Victoria basin

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Introduction:
This study was conducted with in the framework of the VLIR-OI project with the aim of making contributions to the Diagnosis and Remediation of Land Degradation Processes in the Riparian Zone of Lake Victoria Uganda in view of reducing sediment pollution of the Lake Waters with a special focus on the upper river Ruiz and Iguluibi catchments. The study seeks to investigate Sugarcane growing and cattle grazing as drivers to wetland degradation in light of the current farming systems and practices and their contributions to land degradation and pollution of the Lake Victoria waters. Vegetation especially wetlands improves the resistance to erosion. The removal of riparian vegetation tends to accelerate surface erosion as a result of human activities. Increased erosion with in the catchments due to clearing of wetlands for sugarcane growing and cattle grazing has caused adverse increased sedimentation, degraded the water quality, and reduced the water productivity of the Lake Victoria Basin.

Methods:
We conducted a qualitative and quantitative study to investigate Sugarcane growing and cattle grazing as drivers to wetland degradation in Uganda in light of the current farming systems and practices and their socio-economic contributions to wetland degradation and pollution of the Lake Victoria waters. Focus group discussions, key informant interviews, semi structured interviews and observations were undertaken with the relevant stakeholders in the community.

Results:
Findings reveal that in Iguluibi catchment, sugarcane growing is now a major activity indicating land use change since the 1990s. Community members said when planting sugarcane all vegetations including all trees are cut leaving the land bare to allow the tractor to clear the land for cultivation. This has left the land bare without any natural vegetation with increased erosion hence eventually loss of soil fertility and increased sediment pollution to the Lake Victoria waters. As a result of land loosing fertility upland, due to erosion and runoff, most community members have resorted to wetlands for agricultural practices with in the catchment and this has hardly left any natural vegetation to protect the soil and increased runoff to Lake Victoria hence sediment pollution of the lake waters.

In the Ruizi catchment, many valleys, the natural vegetation has been cut and the land has been turned into pastureland. The massive expansion of livestock keeping into the low lands mainly covered by wetlands is relatively new (over the last 20 years). Burning of rangelands is a common practice and seasonal swamps are grazed during the dry season This change of land use as far as farming practice is concerned has had a big impact on the water levels of the River Ruizi systems in a number of ways for example: the wetland filter system for sediments and sediment fixed nutrients is compromised; lowering of the water storage capacity of the papyrus swamps as a consequence of drainage, hence surface lowering; river bank erosion of the Ruizi by livestock coming into the river for drinking; pollution of the River Ruizi by livestock defecating into the water while drinking.

Due to overstocking of the steep slopes by livestock, the low lands are overgrazed which has resulted in soil erosion, that is, mainly sheet and rill erosion, mass movement below cattle tracks, and stone movement by cattle trampling. The steep slope grazing area has generated substantial runoff, the concentrated flow of which causes gullies that cut through the banana groves.

Conclusion

Vegetation management of riparian areas especially wetlands in Uganda should conserve and maintain adequate ecological balance of the Lake by reducing on nutrient-loaded fluxes from the riparian zone into the Lake Victoria basin.