

Factors influencing farmers' adoption of information for Mangrove forests conservation in Democratic Republic of Congo

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Abstract

This study evaluated information flow within rural communities in the Moanda territory, Democratic Republic of Congo with an aim of aiding improved management and conservation of mangrove forests along the Atlantic coast. In this study, sources of information were grouped as conventional and emerging. Barazas and face-to-face communication remain the most significant conventional sources of information in the study area. Emerging sources of information included television, radio-call, telecentres, and mobile phones. The adoption of emerging sources of information was found to be positively influenced by farmers' years of schooling, the number of times per month farmers received, land use information through radio and leaflets/literature. Age of respondent was also an important but negative influence. This study proposed integrating methods and information processes at the local level for improved livelihoods, mangroves conservation, decision making and policy recommendations.

Key words: Adoption, Democratic Republic of Congo, Mangroves management, rural information flow

Résumé

Cette étude a évalué le flux d'informations au sein des communautés rurales du territoire de Moanda, en République démocratique du Congo dans le but de promouvoir une meilleure gestion et conservation des forêts de mangroves le long de la côte Atlantique. Dans cette étude, les sources d'information ont été regroupées comme conventionnelles et émergentes. Les rencontres communautaires et la communication face-à-face restent les sources les plus importantes d'information conventionnelles dans la zone d'étude. Les sources émergentes d'information comprenaient la télévision, les appels radio, les télécentres et les téléphones mobiles. L'adoption de nouvelles sources d'information a été jugée positivement influencée par

les années de scolarité des agriculteurs, le nombre de fois par mois les agriculteurs ont reçu, des informations d'utilisation des terres à travers la radio, les dépliants et la littérature. L'âge du répondant était également d'une influence importante, mais négative. Cette étude a proposé l'intégration des méthodes et des processus d'information au niveau local pour améliorer le revenu de subsistance, la conservation des mangroves, la prise de décision et des recommandations des politiques.

Mots clés: Adoption, République démocratique du Congo, Gestion des mangroves, Flux d'information en milieu rural

Background

Moanda territory is situated at the estuary of river Congo in the Democratic Republic of Congo and is made up of a mangrove ecosystem. The mangroves in this ecosystem are declining due to conversion of land in this ecosystem to other uses and general forest degradation (MINAFENV, 2001). The degradation of this ecosystem has a negative impact on the environment and economic activity associated with mangroves. There is therefore a strong need to diversify livelihoods means so as to protect the fragile mangrove ecosystem. Diversification of livelihood means requires that people have access to unlimited and accurate information about alternative economic activities. Unfortunately, in this region, accurate and reliable information to sustain local livelihoods are limited. There is a strong need to develop information flow mechanisms to people in Moanda to facilitate a reverse in the decline of the mangrove ecosystems. For this to be done effectively, there is need to determine the major information sources and factors that influence adoption of each.

Literature Summary

As reported in many studies (M'fu, 1995; Vunda, 2000 and Lukamba, 2008), Moanda extension services. This has potential to limit adoption of certain technologies because information infrastructure is an essential requirement for successful implementation of information dissemination projects (Ombati *et al.*, 2007). Farmers who are well informed are able to respond appropriately to changes in production technologies and market changes thus resulting in increase in household incomes (Nyongesa, 2008). It has also been demonstrated that if forest products are exploited sustainably, they offer much more economic value than if they are indiscriminately harvested or burned down farming operations (Miko *et al.*, 2009).

Study Description

The study was conducted in Moanda territory in the Democratic Republic of Congo. Moanda territory is located at the Atlantic

coast of the Democratic Republic of Congo, between geo-coordinates 5° 20'– 6° 10' S and longitude 12° 20' – 13° 00 E at the estuary of the Congo river in Bas-Congo Province. The study involved a socio-ecological survey using structured questionnaires and focus group discussions. Secondary data were also used to establish constraints and gaps in land use information service delivery. A multistage purposeful sampling was used in which 200 household units were surveyed. Data from questionnaires were analysed using descriptive statistics in SPSS. . The Logit Model was used to determine factors influencing the use of different sources of information for conservation and management of mangrove forest.

Research Application

Sources of information in this study were grouped as conventional and emerging. Conventional information sources were mainly *barazas* and face-to-face exchanges. The radio was the most important emerging source of information to respondents. The emerging sources of information included television, radio-call, telecentres, and mobile phones although they hardly reached respondents. Farmers' years of schooling, the number of time per month farmers received land use information through radio, the number of time per month farmers received land use information through leaflets/literature and farmers' years influenced farmers' decision to use emerging sources of information. Age of respondent was an important but negative influence (Table 1).

Table 1. Logit estimates for farmers' use of different sources of information.

Factors	Coefficient	Standard error
Age (years)	-0.147*	0.062
Education (Number of years of schooling)	0.441 *	0.199
Credit (1=received credit, 0= Not received credit)	23.924	1.304
TV (Number of time received information through TV/ month)	25.211	1.568
Radio (Number of time received information through radio/ month)	5.784**	1.604
Radio call(Number of time received information through Radio call/ month)	27.308	1.012
Leaflets/literature (1=received information through leaflets , 0=Not received)	7.196**	2.563
Constant	-4.562	1.990
-2Log likelihood		161.985
Model chi-square		134.489
Correctly predicted of use of conventional source of information only		98.8%
Correctly predicted of use of emerging sources of information		82.1%
Overall cases correctly predicted		96.5%
Sample size		200.0
R ²		0.490

*and ** Significant at 5% and 1% levels respectively.

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