

Abstract

This investigation focus the attention into establish the assignment of the uses of the earth as a process and central action of the ordination of the territory in the rive microbasin “El Valle” of Tachira state. To make the investigation, it was made field and office activities with the purpose of getting the diagnostic of physical-natural and socio-economic of the microbasin, the base map and the tematic maps through the overlay map technique it was able to know the capacity and conflicts of the earth use; thanks this, it was determined the territorial unit analysis (TUA), areas in wich there are use's conflict of similar characteristic, wich were a fundamental part for the uses asignation. To each one of the TUA, it was calculated a global index for the asignation of uses to the territory (GIAUT), based on the assignation of a determined weigth in phisical natural and socioeconomics variables. The results get it indicates that the majority of the TUA met the tops conditions for the use to asign were the one indicated for his use's capacity; However in some cases, the actual use didn't correspond with the recommended. This is why it was necessary the adecuation of some assignments wich correspond to the demands of the population but demanding the application of intensive measures of conservation. Considering the use's conflict, it was determined in the microbasin there are a 66,19 % of satisfied use, the one it can be maintain with the uses already stablished of forest, not worked grass, paramo's grassland, xerophytic vegetation and farming; in the 3,57 % of the area with underutilisation, the urban area is confirmed because of been already consolidated and were assigned the not worked grass and farming type 1, 2 and 3 uses. Of the 30,24 % left, with overutilisation conflict, is confirmed the 21,14 % for the farming type 4 wich implays mandatory the application of intensive measures of conservation, the asignation of the 7,42 % for forestry use and the 1,68 % for the not worked grass, enviromental protection, agroforestry and farming type

Keywords: territorial ordination, assignation of land uses, territorial units of analysis.

DISEÑO DE UN SISTEMA DE INDICADORES PARA EL MONITOREO Y EVALUACIÓN EN EL MARCO DEL PLAN DE ACCIÓN PARA LA CONSERVACIÓN DEL PÁRAMO ANDINO VENEZOLANO. ESTUDIO DE CASO, MUNICIPIO RANGEL, ESTADO MÉRIDA

DESIGN OF AN INDICATORS SYSTEM FOR MONITORING AND EVALUATION IN THE FRAMEWORK OF THE ACTION PLAN FOR THE CONSERVATION OF THE ANDEAN VENEZUELAN PARAMO. CASE STUDY, RANGEL MUNICIPALITY, MÉRIDA STATE

Jesús Fernando Araujo Contreras

Resumen

Se diseñó un Sistema de Indicadores dirigido al monitoreo y evaluación del Plan de Acción para la Conservación del Páramo Andino Venezolano (PACOPAV), considerando como área piloto al municipio Rangel del estado Mérida. El estudio se llevó a cabo recopilando y actualizando información de campo, logrando determinar mediante la aplicación de una encuesta a diversos miembros de los Comités de Riego y a la coordinadora general de la Asociación de Comisarios

de Ambiente de los Agricultores de Rangel, que la modificación, intensificación y extensión del uso agrícola responde principalmente a intereses económicos (mayor ingreso y rendimiento). También se analizó la relación del PACOPAV con la normativa legal vigente, siendo concurrente con el ordenamiento jurídico nacional e internacional en el ámbito de la sostenibilidad ambiental, además de corresponderse con la Estrategia Nacional para la Conservación de la Diversidad Biológica. El eje central de la investigación consistió en la identificación y análisis del Sistema de Indicadores de Gestión para el monitoreo y la evaluación del PACOPAV, obteniendo un total de 80 indicadores debidamente caracterizados, interrelacionados con las líneas de acción de las 8 medidas definidas en el Plan. Finalmente, se operativizó el sistema de indicadores partiendo del análisis de cobertura de vegetación de páramo en imágenes Landsat 7 de los años 2.006 y 2.012, y Landsat 8 del año 2.016, resultando una intervención total de la región natural páramo andino entre los años 2.006 y 2.016 de 538,69 ha, aparte de la disminución de superficie de páramo derivada del aumento de la superficie de selva en vertientes húmedas, 426,08 ha, probablemente debido al cambio climático, surgiendo el indicador adicional de “Avance Altitudinal de la Selva Nublada Montano Alta”.

Palabras clave: Monitoreo y evaluación, plan de acción, páramo andino, uso agrícola, indicadores de gestión, análisis de cobertura.

Abstract

An indicator system was designed to monitor and assess the Action Plan for the Conservation of the Venezuelan Andean Paramo (PACOPAV). The Rangel municipality of Mérida state was considered as a pilot area in this research. Updated field information was used to create a survey to both the members of the Irrigation Committees and the leader of the *Asociación de Comisarios de Ambiente de los Agricultores de Rangel*. According to this survey the economic interests turned out to be the main reason for the modification, intensification and expansion of the agricultural frontier. Moreover, the relationship between PACOPAV and the existing legislation was analyzed. It is being concurrent with the national and international legal order in the area of environmental sustainability, also corresponds to the National Strategy for the Biological Diversity Conservation. This research focused on the identification and analysis of management indicators system for the monitoring and evaluation of the PACOPAV. A total of 80 indicators were obtained, all of which were characterized and interrelated with the lines of action of the 8 measures established in the Plan. Lastly, the indicators system was set up, starting from the analysis of vegetation coverage using Landsat 7 satellite images from 2.006 and 2.012 and Landsat 8 images from 2.016. A total area of 538.69 ha. of Andean paramo has been affected during 2.006 and 2.016. Additionally, an area of 426.08 ha. was replaced by the increase in the forest surface on wet slopes, it is likely due to climate change, so a new indicator surged “Advance of the Upper Montane Cloud Forest.”

Keywords: Monitoring and evaluation, action plan, andean paramo, agricultural use, management indicators, coverage analysis.

ANÁLISIS MULTITEMPORAL DE LA COBERTURA AGRÍCOLA Y APLICACIÓN DE UN ÍNDICE DE CALIDAD DE AGUA. CASO DE ESTUDIO: MICROCUENCA PÁRAMO EL ROSAL ESTADO TÁCHIRA, VENEZUELA