Dinira National Park Conservation Status.

The Dinira National Park is located in the Northern Andes, between the Sierra de Barbacoas and Sierra de Portuguesa mountain ranges, in western Venezuela. It´s 452 km^2 wide, and was creating for protecting the upstreams of the Tocuyo, Morere, Curarigua, Chabasquén, Boconó, Carache, Guanare, Jirajara and Monay rivers, and the biologic, geologic, cultural, scenic, and hidrologic resources of the region, which serves almost all the western center population of the country.

The vegetation of Dinira is varied, and it includes subalpine moors, rainy, montane and evergreen forests, shrubs and savannas. However, the areas next to the park boundaries are used a loot for agricultural purposes. It is feared that these anthropic effects could reach the innermost zones of the park, affecting all biodiversity and, therefore, the well-being of a significant amount of people.

By the above, I wanted to know **what is the conservation status** of the Dinira National Park, based on the **spatial structure of land cover categories**, and if that conservation **status reflects the fulfillment of the functions** by which it was created.

For the creation of the Land Cover map, I used a mosaic of 11 bans of the LC80060532016041LGN00 Landsat 8 image (5/11/2016; 30m spatial resolution, 3% cloud cover). With that mosaic, using the 6, 5, 4 combination of bands, I did a maximum likelihood classification, selecting 4 major land cover categories (vegetation, soil (crop), water and urban). I selected 10 training samples for each category, evenly distributed across the image. I then converted the resulting raster to a polygon feature. Separately, I made a buffer area of 10km around the park boundaries, and then clipped this layer with the one of the supervised classification. Next, I selected by attribute the vegetation polygons, made a feature layer from this selection, and calculated summary statistics (sum) of the total area of such polygons. I did the same for the crop polygons, which are not shown in the Land Cover Analysis Model.

I found out that exists a bigger amount of vegetation areas, about 43% more than crop areas in all the buffer zone. Most of the crop areas are found in the northwestern and southwestern region, being the southeastern almost without intervention. However, even though a lot of the nearest zones of the park boundaries are intervened, there´s little affectation of the vegetation inside the park. More than 90% of Dinira is still pristine.

Based on all the above, I could conclude Dinira has a **very good conservation status,** even though there´s still a marked and constant anthropic pressure. These conservation status then could reflect the fulfillment of the functions by why the park was created. The legal figure in charge of Dinira´s administration, the **Instituto Nacional de Parques** (Inparques) is probably working well in their conservation and management plans for the park.

The biggest limitation of this report as a decision tool is precisely it´s methodology. By doing an unitemporal analysis of spatial structure of land cover categories I am only evaluating “what we see now”. To truly discuss how well the park is being conservated, since the date it was created , and Inparques a conservation figure, a multitemporal study should be made, involving more than one satellite image. The second limitation is it´s accuracy assessment. Fieldwork should be made in order to verify these (or other more specific) land cover categories.

For further study, I recommend the making of a more specific land cover map for Dinira, with botanic based vegetation classifications, and at least a two-time evaluation. Verification of the categories in field is a must. I also recommend a more exhaustive pre-processing of the imagery prior to the supervised classification.

Dinira is looking fairly good in terms of biodiversity integrity, and the legal figures in Venezuela seem to be working in favor of that. However, this is not something to be confident of. Human hand is quick and lethal in environmental destruction, and the efforts to decrease this effects is ours to maintain.

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