

# EDUCATION ACTIVITIES RELATED WITH REMOTE SENSING AND ENVIRONMENTAL PROJECTS IN MEDELLÍN – COLOMBIA

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**ABSTRACT:** It work has a brief introduction about the state of art on Remote Sensing Education in Medellín- Colombia, showing a synthesis of the universities which had implemented the course in theirs curriculums.

The second part is a study case of a undergraduate thesis developed by students of Environmental Engineering at the Medellín University. The main goal of the project was to determinate a buffer zone around a protected area, in order to mitigate the impacts of human activities. The main tool in this research were Remote Sensing, and the most powerful achievement was to involve rural communities in the use of those tools.

## REMOTE SENSING EDUCATION - STATE OF ART IN MEDELLÍN COLOMBIA



Figure 1. Localization, Medellín - Colombia

Table 1. Remote sensing education in Medellín - Colombia

Level	Elective	Obligatory	Carriers
Undergraduate	2 publics universities	1 private university	Forest Engineering, Civil Engineering, Environmental Engineering, Anthropology
	2 privates universities		Environmental Engineering
Postgraduate	2 publics universities		Master in Ecology and Hydraulic and Specialization in Environmental Management
		1 private university	Specializations in GIS and remote sensing (duration: 4 semesters)

## BUFFER ZONE DEFINITION AROUND THE NATURAL PARK OTÚN – QUÍMBAYA COLOMBIA

- ✓ It works pretends to integrate a Protected Areas System in the Country, use all the environmental services that those areas offer.
- ✓ Besides, the buffer area try to mitigate the environmental impacts promoted by human activities.
- ✓ It works pretends to create a methodology to define buffer zones around protected areas in the country.
- ✓ One of the most important goals of this project was to involve the rural communities on the use of remote sensing tools.

## STUDY AREA



Figure 2. Natural Park – Otún Quimbaya

## METHODS

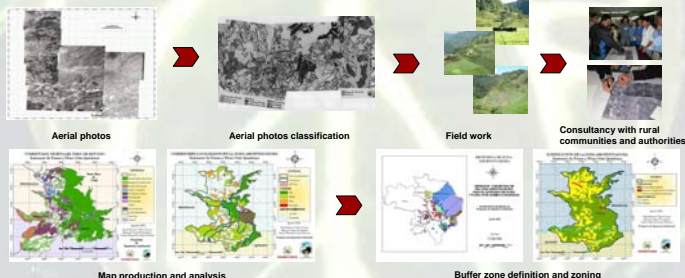


Figure 3. Research Methods

## RESULTS

It works help to:

- ✓ Incorporate new areas with a special environmental interest
- ✓ Protect water fonts
- ✓ Protect natural vegetation
- ✓ Identify biological corridors
- ✓ Include new areas for cattle and agricultural production
- ✓ Community participation on the process

## CONCLUSIONS

- ✓ A protected area by itself does not guarantee the natural resources conservations, it need tools like define buffer areas or biological corridors
- ✓ Community participation into the natural resources conservation is essential
- ✓ This buffer area defined in this work wont be consider as a land use or human activities restriction zone, the cattle and agriculture production in the zone must be focused on the use of alternatives and friendly technologies
- ✓ A protected area does not must be an isolated zone into the regional and national territory.