



ECOSYSTEM SERVICES IN NATURAL PARKS: CHIRIBIQUETE NATURAL PARK

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ABSTRACT

Serranía of Chiribiquete Natural National Park is located between the departments of Caquetá and Guaviare and is considered the heart of the Colombian Amazon because of its geographical position, it is the largest nationally and one on a continental level with an approximate of 4'268.095 hectares, it has been the home and continues to be the

home of indigenous peoples who have inhabited it since ancient times and thanks to them it has been conserved from generation to generation and may have one of the novel landscapes in our territory, it has rules for the protection which is not to allow the entrance to people who can cause irreversible damages in this ecosystem (Pardo, 2018).

KEYWORDS: Ecosystem services, natural park, natural resources.

1. INTRODUCTION

Currently, the territories considered as natural parks are limited, due to various factors to which they are exposed, such as climate change, pollution, human beings, among others, highlighting the importance and need that these have, thanks to them, all kinds of fauna and flora are conserved, and they help in a different way to the survival of our planet. These parks protect the natural heritage, biodiversity that is available, it is also a key piece of cultural, economic and social benefits, which contribute to the research, an analysis will be established with the information collected throughout the course, where it can be observed fully the

particularities in the various areas that are found, the impact generated on the population surrounding the natural park (Rangel, Franco & Betancur, 1995).



Fig. 1: Source Serranía de Chiribiquete Natural Park (Source Natural Parks of Colombia).

2. Theoretical framework

It is important to highlight that as future civil engineers we must know and recognize vital aspects of different territories in which it can be practiced, since it is important to understand the various characteristics that we can find, respect our environment since our intervention in different processes such as constructive, administrative and social are of great importance and great impact, since all the norms established by manuals that govern us must be taken into account, so as not to cause irreversible damage, imparting from basic knowledge, to begin an analytical process and investigative, learning from every detail of the territory where this educational exploration will be focusing, where all the elements of the environment are exposed in the Chiribiquete Natural Park, with the purpose of acquiring different knowledge, concepts linked to the Fluid Mechanics subject, in order to have an adequate training developing investigative capacities, integrating ecosystem services in the park.

Highlighted vital aspects of this, the services it offers in front of society, since in the ecosystem part it provides a great benefit to society with its great production of oxygen, water with its rivers (Tunia, Itilla and Yará), flora and fauna With great examples of flowers that are only observed and detailed by the scientists and experts in the area of biodiversity in charge of the area, this wonderful park has the following types of ecosystem services: provisioning services, regulation services and support services, the only one that does not comply is that of cultural services for obvious reasons, one of the main ones has already been pointed out (Arévalo & Betancur, 2004).

Giving rise to the importance of each of the topics selected in advance by the area teacher, expanding specific characteristics, relating each point of view of the work team for the extensive collection of information, directing the research in the best way to be able to open step to each of the exposed points.

Identify the existing problems in this type of territory since it can be affirmed that they are places that have not been totally modified, marking a problem question that helps us determine the importance of natural parks at national and international level, the impact that generates, with each of the changes present in the various areas, where objectives are set for the realization of said research, broadly organized and you will see each of the deliveries displayed throughout the course, in order to achieve in its purpose a Article-type document, based on the aforementioned topic for the support of the same for academic purposes, identifying and relating this research to the mechanical subject of fluids.



Fig. 2: Source Serranía de Chiribiquete Natural Park (Source Natural Parks of Colombia).

To start with our approach to the problem, we must know certain meanings related to our research topic. As a first stay, we must know what natural parks are; Natural national parks are certain places whose ecosystems or habitats or even areas have not been fully modified or altered by humans (in any way possible), places that have significant value and great contributions to science and education, and certain areas that are substantial, for humanity and society, and in their search for their perpetuity, subject to rigorous care and natural conservation.

On the other hand, we know that ecosystem services are great benefits that an ecosystem or a place with life brings to society and that they improve people's health, economy and quality of life, that is, like this park with its benefits It helps us as a Colombian society to develop in

many areas of life. In other words, environmental or ecosystem services are also those services that result from the proper functioning of ecosystems (Naranjo, 2017).

But do we really know how these services work in the Chiribiquete Park? Or if in this park, is there an ecosystem service that benefits us as a society? Let's analyze this problem from certain points of view, such as the characteristics of this park and whether it offers any ecosystem service in this regard.

Regarding its geographical location, the Serranía de Chiribiquete National Natural Park is located in the Eastern Cordillera, to the north of the Amazon plain, limits the western upper Rio Negro region and the southern herbaceous savannahs of the Orinoquía, offering us beautiful and infinite variety of plains and Amazonian landscapes that provide a great variety of unique habitats, in a very good state of conservation for the fauna of these two great biogeographic lungs (Guyana and Amazonia), which makes it a unique space for processes evolutionary of flora and fauna species associated with these different natural units or generalities (Lozada, 2016).

In 2018, this great park was declared a mixed heritage of humanity, since it represents an immense contribution for the preservation of biodiversity and natural ecosystems for the planet and for the conservation of its ecosystem services; as well as the great biodiversity and multiplicity of cultural expressions of the communities that have taken over the territory over time, makes it have the largest amount of rock art; which are hieroglyphics painted in the caves and on the stones, with which the primitive men communicated, in this park are the majority of the American continent.

As we realized it was declared mixed heritage, in the development of this work we will realize the reason for this award. Within the protected area are the hydrographic basins of the Apaporis, Mesay and Yari rivers, belonging to the hydrographic area of the Caquetá river, with an annual rainfall of 4000mm.

3. METHODOLOGY

The present report wants to explain and thus ratify that the Serranía del Chiribiquete National Natural Park, located between the departments of Caquetá and Guaviare, is a very important natural reserve for our country since it becomes the largest protected area in the Amazon, therefore The above calls for conservation and protection in favor of safeguarding the natural

and cultural wealth of the park, it was named as a natural and cultural heritage of humanity in session 42 of the Unesco World Heritage Committee, said the above means that natural and cultural values are protected there (Paez, 2019).

It should be identified so that it understands the responsibility we have for the ecosystem services generated by the park, analyzing, investigating and inquiring about the mountainous area of Chiribiquete and thus reaching a commitment to stop deforestation, take care of hydrographic zones, biodiversity and all Ecosystem services of the reserve as evaluation of the information, socioeconomic and cultural that allows: ecological assessment, social assessment, vulnerability analysis of the services of the reserve. This extensive place of world importance requires an agreed work and commitment in the Colombian territory and its neighbors of the importance reserve. Due to the natural and cultural significance of this place, tourism is not allowed, with some exceptions.

From the perspective of ecosystem services, it is proposed to make the contributions of ecosystems to human well-being visible. This turns out to be an opportunity to read the relationships that exist on a territory between the biophysical dynamics of the paramour ecosystems and the different valuations, perceptions and uses by direct and indirect beneficiaries of this ecosystem, at regional levels and local (Rastrojo, 2011).

4. RESULTS

With the due investigation that we have carried out in this work to be able to expose the most fundamental data that must be made known of a great natural reserve such as the Chiribiquete National Natural Park, which people do not provide the sufficient attention that it needs, that it must be disclosed for its due care and protection so that it does not continue to be affected by external agents who see it as an opportunity to profit either out of necessity or simply out of ambition, the most important thing is for people to start taking awareness of the things they have in their territory or in another country, which they are unaware of whether it is not in their current location, lack of interest, for not appearing in the media or simply indifference to the wonders that our beloved Earth offers us and that the government does not promote its preservation, care and due appropriation that we should all have towards our small wonders that our territory offers us (Montaño, 2016).

We try to make the content as easy to understand as our objective is not only to analyze what are the ecosystem services provided by the Serranía del Chiribiquete National Natural Park

but also people at the national and international levels who have the opportunity to read and analyze in depth the document appropriate not only the Chiribiquete National Natural Park but also all the natural reserves in the world which are the ones that generate ecosystem services, which is the main theme and focus of this work.

CO₂ reduction that is increasingly greater in the ozone layer but good, although these days it has been possible to improve significantly due to this new stage that humanity is having and home to some local tribes which are a fundamental part of the culture. That is why it is important to learn to appreciate the things that we have that seem so insignificant but that in reality are the most precious that humanity can have, and that little by little we realize that if we do not provide the necessary attention, we will lose each time. Plus the services that they offer us for our existence and even to be able to appreciate them, go through them and gradually begin to take an attachment and appropriate appropriation.

We can see that the services that stand out from the Chiribiquete National Natural Park are: provisioning services are those referring to the quantity of goods or raw materials that an ecosystem offers, such as wood, water or food, regulatory services are those that derive of the key functions of ecosystems, which help to reduce certain local and global impacts (for example the regulation of the climate and the water cycle, the control of soil erosion, pollination ...), cultural services (in the area of tribes that inhabit the place not for recreation or leisure) and support services such as biodiversity and natural ecosystem processes (What are ecosystem services) that guarantee a good part of the above, In this park we find all the essential aspects of ecosystem services that Mother Earth offers us for our benefit and to control our carbon footprint a little, which over time increases and in great proportions as population growth is very high (Rojas, 2018).

It should be made more personal with the curriculum that is at the height that this majesty deserves to intensify its care, preservation, maintenance, study and analysis to further observe its properties and benefits which are too many to list, not only for its study but also to generate a management plan which helps its preservation for many years and mitigate the bad things it has had over time, in this there must also be a security division which is in charge of the protection of all its components especially that they do not cut trees, avoid poaching, poor adaptation of flora and fauna, preservation of the place that the Amazonian indigenous people of Chiribiquete who affirm that it is the most sacred place in their extensive territory which was raped and harassed by groups outside the law (FARC) although in the peace treaties they

have decided to go out and leave the weapons and left this great place which is the heyday of one of the best movies in Colombia very representative winner of some prestigious awards in the film industry which is Wild Magic which shows in its this park in its maximum splendor that shows us a place which we have a very different idea from the real one, the life that this great work of art that nature has created has and we must know how to take advantage of and admire for what it is, which has nothing to envy to works like Guernica ,The Starry Night or to Gioconda itself and is at or above it depending on the eyes of its viewer (Lozada, 2016).

If we take a good look, the provisioning service refers us to the basic necessities, which makes this park an innate source of progress in the nearby tribes, since with these they can create their homes, feed themselves either through hunting of animals or by means of agricultural crops; This for a society is an immense point in what has already been said, its progress, and it helps us to persevere a better country.

On the other hand, the regulatory services for a society as polluting as ours, although in this location it is not very abundant, help us and favor in many climatic aspects, regulating our environmental variability, and on the other hand it helps us with the geological issue to cope with its flora and others, this is thanks to its variety of biodiversity and care that is given to the park (Flores, 2008).

In the cultural aspect, it leaves an immense mark on what were the past tribes, as already said, in the Chiribiquete Park, we find endless demonstrations of paintings and cave symbols, this is something that does not take off overnight. The morning as it is colloquially told, and perseveres the memory of our ancestors, forces us not to forget them and continue with many of their legacies (Vargas & Baron, 2018)



Fig. 4: Source Serranía de Chiribiquete Natural Park (Source Natural Parks of Colombia).

Like why is it important to conserve a natural park? Or perhaps also what ecosystem services can we find in the different parks? Here, a series of global questions can be asked, such as: Why is it important for society in general to be properly informed in everything related to the environment? Or how can we promote in the academic field the preservation of environmental spaces? Since we are clear that in order to guarantee that several objectives are met, we must start with things that are basic in various ways, but with them we promote the creation of a change from the most fundamental point in a community with a positive impact, where questions that we can use are used take in matter to guarantee the discussion center, to complete a structured investigation, various groups of people seek only to mitigate their needs, causing irreversible damages such as deforestation or the contamination of vital resources such as water. It can also be highlighted with indigenous communities that are the main protection of areas that are vital for the country, since it should be mentioned that in the population we have 3.5% of indigenous communities that have contributed in various ways to the protection of natural parks, reserves, between different environmental centers that can be found (Vargas, Galviz, & Peñaranda, 2011).

The protected area also contains various hydrographic scenarios, with a humid tropical climate. This park is also recognized and has great cultural importance since rock art can be found, where it makes it an attraction for archaeologists and others, where it is highlighted that this place was restricted to capture this art that prevails over several centuries. Giving this great importance to the park being considered a mixed heritage of the world, where work has been done for the conservation of this territory for its great environmental value, as well as cultural that is there. Also highlighting that in this territory more than eighteen indigenous groups are sheltered, which is considered a mosaic of cultures, languages among other samples of these groups, who live there, we can demonstrate all the aspects in which this park is the most important in Colombia, not only for the biodiversity it has, but also for its history, since with it we can.

It is important to emphasize the preservation of these as the damages that may be caused may be irreversible and may thereby generate more damages, drastically affecting fauna and flora. Concluding how important it is as a society to begin to become aware in order to improve and control damage caused by us, leaving a positive footprint on the planet so that future generations can fully enjoy natural resources, conserve all kinds of fauna and flora, and Therefore, the culture that we find in it, such as the art that was provided to us by ancestral

inhabitants of these lands, protecting each of the indigenous communities since they play a crucial role for the protection of these Eco systematically rich areas (Rueda, Perez & Vargas, 2018).

We are aware that we have to deal with this since our main purpose as future civil engineers is not only to carry out good infrastructure, the most innovative way, we are aware that one of the main objectives is to carry out a common good where with our intervention it is beneficial in all the senses, that the environmental part is taken care of since various studies must be carried out to avoid disastrous impact for any area, where we differentiate and welcome in the best way everything we have in our hands, as students and being part of a community, we innovate with different research methods that help and promote us for training with the highest standards, that we learn how to deal with different cases, that we contribute to our educational and common community the need for knowledge about the environment that, linked to the different subjects proposed for our training, we seek methods with which we contribute to start from scratch, to thereby generate the motivation of others so that we are more reasonable with what is available, where a diversity of aspects is needed to be able to generate a change, starting from the minimum to be able to forge a future where it can be considered to continue motivating research and knowledge formation of something of utmost importance such as it is the environment, referring to what can be found in the natural parks.in order to do so, generate the motivation of others so that we are more reasonable with what is available, where a diversity of aspects is needed to be able to generate a change, starting from the minimum to forge a future where it is possible to consider continuing to motivate research and training in knowledge of something of utmost importance such as the environment, referring to what can be found in natural parks.in order to do so, generate the motivation of others so that we are more reasonable with what is available, where a diversity of aspects is needed to be able to generate a change, starting from the minimum to forge a future where it is possible to consider continuing to motivate research and training in knowledge of something of utmost importance such as the environment, referring to what can be found in natural parks. Referring to what can be found in the natural parks. Referring to what can be found in the natural parks.

5. CONCLUSION

In this sense, the ecosystem services provided by the Serranía of Chiribiquete National Natural Park were analyzed and understood. The analysis identifies why the function of the

ecosystems present in the park should be maintained, in order to guarantee climate variability by maintaining forests, and to be able to mitigate Climate Change globally. The capacity of ecosystems to generate the natural supply and its demand outside the protected area by their local communities and, especially, by the indigenous peoples related ancestrally in the region was explained.

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