

5.2 Fibras: Essence and territory

<p>Name of the project</p>	
<p>Partner</p>	
<p>What is Fibras?</p>	<p>Fibras is a cooperation agreement between the Humboldt Institute and Ecopetrol for the planning and management -under criteria of sustainable development- of biodiversity and its contributions to well-being in territories in Huila, Orinoquía and Magdalena Medio, considering science-based information. It seeks to strengthen the sustainable development of these areas of interest through the Conservation and Sustainable Use of Biodiversity. (Link to Humboldt's Institute website: http://humboldt.org.co/fibras/)</p>
<p>What is Fibras made of?</p>	
<p>Component (image) 1: Ecoreservas</p>	 <p>The objective is to identify and manage natural areas as part of other effective Area-Based Conservation Measures (OMECA), thus contributing to the management (restoration, preservation, sustainable use or knowledge) of local, regional, and/or national biodiversity. (Link to Humboldt's website: http://humboldt.org.co/fibras/componente1.html)</p>

Component
2:
Resilience



The assessment of socio-ecological resilience (interaction between human groups and ecosystems) will provide real and objective information about the various pressures exerted on natural resources in territories of the Orinoquía (Tillavá River) as well as Meta's and Casanare's foothills. This will allow to predict the response of the socio-ecosystem to interventions by the private sector or other actors that are present in these territories. (Link to Humboldt's website: <http://humboldt.org.co/fibras/componente2.html>)

Component
3:
Monitoring



Researchers from the Humboldt Institute and local organizations at the Orinoquia and middle Magdalena regions join forces to monitor the fauna that surrounds them. In the central region of the Colombian inter-Andean valley and Meta's foothill, a participatory science experience will be implemented; one where the local community contributes to the monitoring of local biodiversity.

In this inclusive and participatory adventure, technological development is an indispensable ally that will mark a milestone in the knowledge about Colombian biodiversity. An effort to install 600 camera traps in the regions of Magdalena Medio, Casanare's and Meta's foothills and Río Tillavá. During this phototrapping activity, large volumes of information on birds and land mammals will be collected (Link to the Humboldt page:

<http://humboldt.org.co/fibras/componente3.html>)

**Component
4:
Expeditions – Use of
Biodiversity –
Genetics**



This component is an adventure through the territories of the Orinoquía, Huila and Magdalena Medio regions to identify, in the first place, plant species with potential uses that provide well-being to local communities and, conceivably, economic development based on sustainable practices. Secondly, to discover microorganisms, fungi, plants or enzymes with the intention of using them as solutions in polluted ecosystems.

In three expeditions, genomics experts from the Humboldt Institute, the universities of Los Andes (Bogotá) and EAFIT (Medellín), are collecting genetic (and genomic) information from bacteria and fungi in water and soil. This information will represent the first inventory of microbial biodiversity in soils of the Casanare foothills (Orinoquía), Magdalena Medio and the Ecoreserva La Tribuna (Huila).

Through the genetic characterization of the bacterial and fungal communities in soil, water and sediments, relevant information will be obtained thus allowing the estimation of hydrocarbon biotransforming potential on them.

<http://humboldt.org.co/fibras/prensa/expediciones-genomicas.html>

This input will be key in the design and implementation of mitigation strategies in cases of oil spills. With the development of this component, the FIBRAS agreement will contribute to the formation of capacities in the use of genetic tools for environmental monitoring in Colombia. (Link to Humboldt's website: <http://humboldt.org.co/fibras/componente4.html>)



**Component 5:
Knowledge**

The Humboldt Institute and Ecopetrol will promote high-impact initiatives focused on research and development in bioeconomy and biosolutions; likewise, they will broaden knowledge on sustainable uses of biodiversity in local communities of Huila, the Orinoquía and the Magdalena Medio. All this will be developed from a comprehensive view of the opportunities present in natural capital, as a key element of social welfare and sustainable development.

With the design and implementation of a program of stimuli to research, aimed at undergraduate and master's students - who will be linked through a public call -, the development of science-based projects will be implemented on issues related to biodiversity, ecosystem services and bioeconomy.

Through academic spaces and collective construction of knowledge, such as virtual and face-to-face conferences, regional seminars, diplomas and meetings for dialogue and exchange of experiences, this component – aligned with the others that make up the multi-stakeholder cooperation agreement – aims at strengthening the positioning of biodiversity and its contributions to human well-being.
<http://humboldt.org.co/fibras/componente5.html>

SDGs to which it contributes



SbN Social Challenge (IUCN)



Opinion or testimonial

"This voluntary effort to create 50 eco-reserves with an approximate extension of 15,000 hectares, on properties owned by the Business Group, allows us to achieve environmental conservation goals and move towards meeting international biodiversity targets, as well as our commitment to achieve net zero carbon emissions by 2050."

- Santiago Martínez, Sustainability and Decarbonization Manager at Ecopetrol

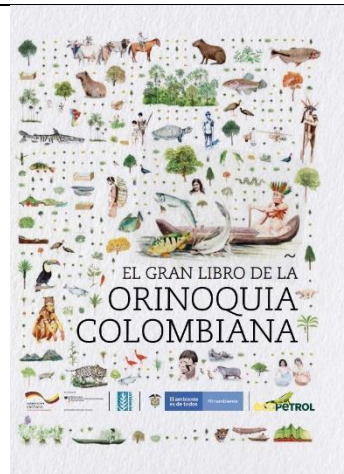
Source:

https://www.ecopetrol.com.co/wps/portal/Home/es/?1dmy&page=detalleNoticias&urle=wcm%3Apath%3A%2Fecopetrol_wcm_library%2Fas_es%2Fnoticias%2Fnoticias%2B2021%2Fred-ecoreservas-ecopetrol-humboldt

"Fibras is an effort between the Humboldt Institute and Ecopetrol to think together about the territory in a permanent dialogue with the communities and to put knowledge at the service of the challenges of sustainability"

<http://humboldt.org.co/fibras/videos/intro-fibras.mp4>

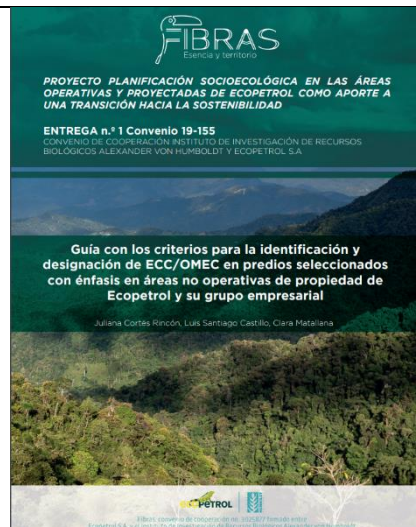
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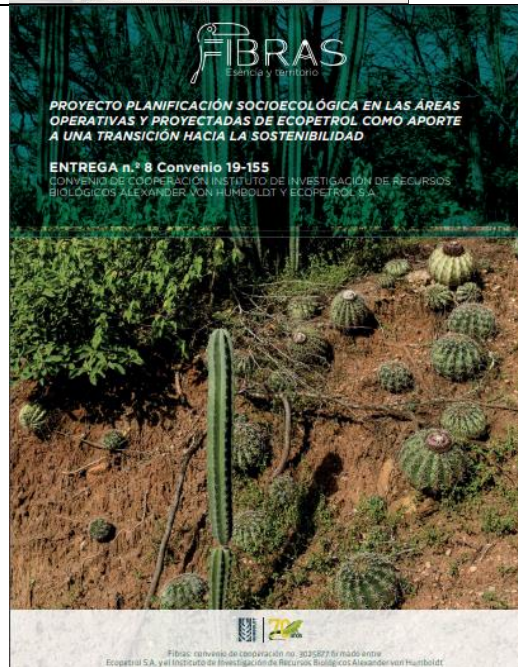
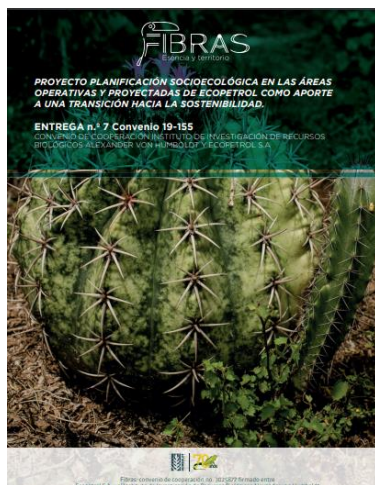
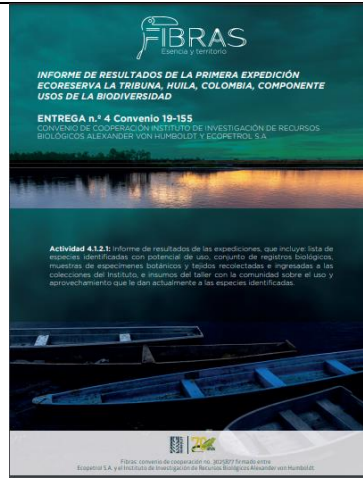


<http://humboldt.org.co/fibras/gran-libro-orinoquia.html>



<http://humboldt.org.co/fibras/prensa/biodiversidad-y-petroleo.html>





<http://humboldt.org.co/fibras/prensa/cuadernillos-fibras.html>

<http://humboldt.org.co/fibras/prensa/resumen.html>

Annexes:

Catalog of images and sounds

Playlist Videos: <http://humboldt.org.co/fibras/prensa/catalogo-imagenes-y-sonidos.html>