



Biodiversity Management

GEB's heart is green

Research, innovation, the incorporation of good practices and promoting actions to prevent pollution and mitigate climate change are key principles in managing our territories.

Why is it important?

(103-1)

Biodiversity Management is a central part of our project development process and of the way we relate with the territories. For this reason, at the strategic management level we developed the Sustainability Policy as the foundation for the construction and management of the environmental component of our Group and its affiliates.

To this effect, in 2019 at GEB we worked on developing management strategies in the territories of our projects that involve making informed and timely decisions that are responsive to the regions' environmental, social and economic signals. In addition, we established agreements aimed at complying with current environmental regulations that respect the environment, promote research, development and innovation (R+D+I); incorporate good practices and promote actions aimed at preventing pollution and adapting to and mitigating climate change.

The Corporate Governance Code establishes some of the main guiding principles of our company (compliance is mandatory), and it acknowledges Environmental Management as an element of social responsibility that enables harmonious relations with our stakeholders in order to achieve corporate sustainability.

Our Sustainability Policy is the tactical-level corporate document that provides guidance for our company's actions aimed at sustainability and promotes the search for a balance between creating value for our shareholders, the well-being of communities and employees, and the minimization of the environmental impact on the territories in which we are present.

Our electric energy transmission and gas transportation projects and operations pass through 311 municipalities in Colombia, featuring broad biological diversity and environmental wealth, which offers the opportunity to connect the territories through green corridors based on infrastructure layouts and designs that mitigate impacts on the vegetation cover, with adequately controlled and monitored works interventions and operations, and optimized environmental offsets aimed at achieving the greatest positive impact on the territories, including the involvement of communities under the premise of generating shared value. In this sense, our biodiversity management goes beyond environmental legal compliance, and becomes a manifestation of our cultural attributes of Social Awareness and Superior Performance.



Photograph by our employee Milton Eduardo Sánchez

How we manage it

Our green initiatives

(103-2) In 2018 we began to formulate and implement initiatives framed in strategies aimed at sustainable management in the territories through which we pass. In 2019 we began to develop the concept of Green Corridors, a strategy aimed at contributing, in terms of the ecological connections of the territories, to the approach towards the rights of way of the transmission lines. To this end we initiated a contract with the Alexander von Humboldt Biological Resources Research Institute to develop an ecologically functional landscape design that would decrease the impact on biome, facilitate connections between habitats, and favor the ecological connectivity of the landscape environment and its integrity in electricity line rights of way and their contiguous areas.

(304-3) We also initiated a contract to perform the Tesalia-Alfárez Forest for Peace project, a component of which is the rehabilitation of 45.82 hectares of the Páramo del Meridiano Regional Natural Park, which is managed by the Nasa community, located in the Las Mercedes reservation. In this manner we fulfill the environmental obligations related to surveying banned species and their removal from the reservation. In addition, we carried out an intervention of 7 hectares through sustainable productive systems, as well as environmental education activities for the community

and the development of the peace and historical memory monument, in order to develop a Sustainable Management Model in the territory (See the Annexes).

Using the *BioTablero* application developed by the Alexander von Humboldt Biological Resources Research Institute in 2018, as an initiative of innovation and development by our company to approach environmental offsetting, we have continued working (with said tool as initial input) on decisions for offsetting the biotic component. In addition, in 2019 we generated the offsetting portfolio for the Mocoa - Jamondino Reconstruction project.

In terms of fauna, we developed the Field Manual for monitoring the Andean bear and the mountain tapir, in order to develop standardized procedures for monitoring these species in all the territories (they can be used both by our company's professionals and the communities). As a means for dissemination, we presented this experience at the FISE Fair, where we received recognition during the second edition of the Significant Experiences and Good Practices program in environmental and social management of the Mining and Energy sector. We also plan to hand out 500 copies of this manual to the Regional Environmental Agency of Alto Magdalena (CAM, for the Spanish original).

In the case of TGI in Colombia, we monitor fauna and flora at the gas compression station (GCS) in Hatonuevo, La Guajira, with the objective of assessing the status of the dry tropical forest ecosystem in the area of influence of our operations. In this process we took into consideration the proximity of the Wayuu Lomamoto reservation and included the community in the sampling activities and the survey of wildlife flora and fauna. The monitoring results indicate that the ecosystem has been preserved and that the activities carried out by TGI have not affected the environment.

We also support the Miraflores regional office of the Boyacá Environmental Agency (*Corpoboyacá*) for the preservation of native species that are representative of the strategic ecosystem at Macizo de Mamapacha and Bijagua. To this end we have established a nursery where we will plant seedling canelo, ceibo, ocobo, macana palm and wax palm. We will plant 15,000 trees in the territories of the municipalities of Rondón, Zetaquirá Miraflores, San Eduardo and Berbeo, which are in the area

of influence of the strategic ecosystem. In 2019 our Colombian affiliate also signed an agreement with the Environmental Agency of Santander (CAS, for the Spanish original) to support the Banco2 initiative, which pays for the preservation of ecosystem areas of interest to promote preservation and recovery of deforested areas. The agreement selected 23 families from the municipalities of Florián and Jesús María that own properties located in strategic ecosystems of the environmental agency. These families will receive incentives to preserve the forests on their properties and to reforest the area with native species.

In order to strengthen the Environmental Management strategy of the Corporate Group, including our affiliates, we entered into an agreement with the Humboldt Institute to generate knowledge and carry out interventions to translate the purpose into additional and voluntary opportunities, in terms of biodiversity, always involving the communities. Through this experience we expect to set the tone for Guatemala and Peru, where we can probably work in similar projects.



Photograph by our employee Luis Ardila Cárdenas. Photography contest

Transmission tower in Filandia municipality, part of the Armenia project between the Quindío and Risaralda departments.



(304-3) At our Contugas affiliate in Peru we found that the layout of the Ica regional gas pipeline passes through protected areas that belong to the Buffer Zone of the National Reserve of Paracas (ZARNP, for the Spanish original) and the National Reserve of San Fernando (RNSF, for the Spanish original). For this reason, in 2014 we restored 218 hectares and initiated ongoing monitoring to identify possible improvements in the ecosystem. As a result of our monitoring, in November 2019 we found that the vegetation cover in the area has increased slightly. The historical analysis also shows that average height (growth) is directly related to the increase in vegetation cover.

At Trecca, in Guatemala, we carried out reforestation activities in 12 hectares of the areas in which biodiversity is affected. These activities involved planting 5,555 trees. We also performed

maintenance on 10 hectares that had been reforested in previous years.

In 2019, we made offsetting payments through the private fund of the National Institute of Forests, to reforest 17.44 hectares affected by construction of the project, for a total of 1,037.90 hectares reforested in the last 9 years in partnership with the National Institute of Forests.

In the operations of Cálidda in Peru we have not identified any significant impacts on biodiversity. However, in 2019 plans were prepared to expand the natural gas network through a protected area in Lima: the Pantanos de Villa Wildlife Refuge. To this end we developed all required controls in the approved Environmental Management instrument to mitigate impacts in this area of high biodiversity.

In order to continue the voluntary restoration strategies defined by our Corporate Group,

In compliance with mandatory offsetting, we intervened 35.5 hectares and planted 9,292 specimens of native vegetation.

we performed maintenance on 6,500 specimens planted on 16.6 hectares surrounding the Tominé reservoir and 41,115 specimens of native vegetation at 45 hectares near the Barbas Bremen Soil Conservation District.

Impact Measurement

(103-3) Our company approaches Biodiversity Management in areas where strategic or degraded ecosystems are present by means of strategies that are in place and ongoing monitoring and maintenance of the strategies, as follows:

Number of hectares and number of specimens planted through mandatory offsetting strategies implemented or under maintenance

In 2019 we planted 1.2 hectares with 1,790 native tree species at the Protective Forest Reserve of the Bogotá River Upper Basin in high Andean ecosystems, thereby fulfilling the offsetting for use of forests established by the Regional Environmental Agency of Cundinamarca (CAR, for the Spanish original).

In Altamira (Huila) we implemented enrichment strategies on 3 hectares by planting 500 specimens of native species prioritized by the Regional Environmental Agency for Alto Magdalena (CAM, for the Spanish original).

In Risaralda and Quindío, in neighboring areas to the Barbas Bremen Soil Conservation District, a strategic area in the region for the preservation of water resources, we intervened 17.8 hectares by planting 7,002 specimens of native vegetation.

RESULTS

- We developed the concept of the Green Corridors initiative, aimed at developing connectivity processes with sustainable strategies to be developed in the electricity line rights of way areas.
- We developed the strategy for monitoring the Andean bear and the mountain tapir on Colombia's Central Cordillera, in areas of influence of the Ecuador Interconnection and Tesalia-Altamira projects.
- Through a partnership with Fundación Wii, we published the Field Manual for monitoring the Andean bear and the mountain tapir. We are currently in the process of delivering copies to the Regional Environmental Agency of Alto Magdalena (CAM).
- We used the *BioTablero* application for decision-making regarding environmental offsetting of biotic components in the framework of the Manual for Offsetting the Biotic Environment published by the Ministry of the Environment and Sustainable Development.
- We began performance of the contract of the Tesalia-Alfárez Forests for Peace project, which includes the rehabilitation of 45.82 hectares at the Páramo del Meridiano Regional Natural Park.

In 2019 we intervened 61.6 hectares as part of the maintenance performed on 47,615 specimens of native species.

TGI

- We monitored fauna and flora at the gas compression station (GCS) in Hatonuevo, La Guajira.
- We provided support to the Miraflores regional office of the Boyacá Environmental Agency (*Corpoboyacá*) for the preservation of native species that are representative of the strategic ecosystem at Macizo de Mamapacha and Bijagua.
- We signed an agreement with the Environmental Agency of Santander (CAS) to support the BanCO2 initiative, which pays for the preservation of areas of ecosystem interest to promote preservation and the recovery of deforested areas.

Contugas

- We continued to monitor the improvement of the ecosystems of the Buffer Zone of the Paracas National Reserve. As of November 2019 the vegetation cover had increased.

Trecsa

- We planted 5,555 trees on 11 hectares. We also performed maintenance on 10 hectares we had reforested in previous years.



Photograph by our employee José Alejandro Rivera. Photography contest

CHALLENGES

- We will implement a pilot program with the Green Corridors initiative in 20 hectares of electrical rights of way areas.
- We will formulate the connectivity strategy in the Serranía de Perijá - Sierra Nevada de Santa Marta.
- We will design and implement the research pilots to manage areas invaded by exotic species in the Tominé Reservoir.
- We will implement the Tesalia-Alfárez Forests for Peace program.

TGI

- We will execute a reforestation contract to recover strategic areas in

the areas of influence of our projects.

- We will replicate what was done at the Hatonuevo GCS regarding fauna and flora monitoring, with emphasis on infrastructure near strategic ecosystems recognized by the regional environmental authorities.

Cálidda

- We will expand the natural gas network through a protected area located in Lima (Peru), the Pantanos de Villa Wildlife Refuge, by implementing all necessary controls defined in the approved environmental management instrument in order to mitigate our impact in this high diversity area.