

## Celsia's Commitment to Biodiversity

At Celsia we are committed to contributing to slowing the loss of biodiversity (an urgent challenge for the world), as a consequence of the planet's overpopulation, excessive and unsustainable consumption of goods and services, pollution, the climate crisis and the loss of habitats and ecosystems, among other factors.

Our commitment to biodiversity seeks to strictly comply with current regulations and carry out actions that go beyond such compliance:

- We have plans, programs, projects and tools to manage biodiversity in all of our operating assets and in planning and construction projects.
- We have an Environmental-Management System that includes the biodiversity variable.
- We attend to the impacts of our activities based on the mitigation hierarchy (avoid, reduce, restore, mitigate, compensate).
- We manage biodiversity with the highest environmental standards.
- We proactively reduce and mitigate the risks of our operations and new projects.
- We create alliances with third-party experts to study biodiversity.
- We carry out voluntary actions for the ecological restoration and recovery of biodiversity with third parties and with the ReverdeC Program.

### Mitigation Hierarchy

To manage the impact of new projects and our operating assets, we apply the mitigation hierarchy, through which we prioritize the execution of actions to avoid and reduce impacts on biodiversity, mitigate them, restore them, manage them, and – when this not possible – make due compensation.

In the early phase of planning new projects, we apply geographic information systems to verify that, as far as possible, our projects do not affect areas of global importance for biodiversity. Thus, we give a greater development option to those projects that have a minimal impact on ecosystems and, therefore, on biodiversity.

### Partners and Allies

We have partners and allies to work together on biodiversity issues:

- The Environmental, Agricultural and Agroindustrial Oxygen Association of Colombia.
- The University of the Pacific.
- National Federation of Coffee Growers.
- Water for Life and Sustainability Fund.
- National Aquaculture and Fisheries Authority (AUNAP in Spanish).
- The Farallones de Cali National Natural Park.

- *Universidad de los Andes.*
- The Guaya canal Foundation.
- ConTREEbute.
- *Bioasesores de Colombia.*
- Forest Management and Environmental Consulting.
- The *Paisajes Rurales* Corporation.
- Biota Consulting and Environment.

### No Net Loss in Biodiversity

Progress made in the reporting year: The Company decided to establish this goal beginning in 2020, to achieve a baseline and to measure the net loss of biodiversity. We have a goal of no net loss or net improvement in biodiversity, to have 100% of new projects / facilities in operation with no net loss of biodiversity, within a period of 5 years, between 2020 to 2025. The company decided to set this goal from 2020, to achieve a baseline and to measure the net loss of biodiversity.

### Other Management Mechanisms

#### Biodiversity Policy

We have a Biodiversity Policy and plans, programs, projects and tools to manage biodiversity in all operating assets and in planning and construction projects, that was formulated in 2016. In 2020 Celsia is reviewing its Environmental and Biodiversity Policy in order to adapt it to current conditions.

#### [Learn about our Biodiversity Policy](#)

Likewise, we have an Environmental-Management System that includes the biodiversity variable, which is evaluated by our Socio-Environmental Team, which is in charge of monitoring the implementation of the measures contained in the Environmental-Management Plans (EMPs) and the follow-up and monitoring plans, both for the construction and operation stages. All this information is supported by the Environmental Compliance Reports (ECRs), which are verified by the competent environmental authority.

## Our operations and their impact on Biodiversity

At Celsia we have evaluated and mapped the sites (generation plants, administrative offices and sites) that are under our responsibility. This allows us to determine their level of importance for biodiversity, in addition to the potential impacts that our operations may have on ecosystems.

We have operations in Colombia (Salvajina, Calima, Prado, Alto Anchicayá and Bajo Anchicayá Hydroelectric Plants, in Valle del Cauca, Colombia) that are more than 10 years old and that were created before Law 99 of 1993. We highlight the fact that we have constantly worked in these plants, implementing actions aimed at preventing, mitigating, restoring, correcting or compensating for the environmental and biodiversity impacts that may arise in the development of our activities.

## Threatened Species

In order to get to know the fauna, in our facilities we have identified a total of 616 species that are on the Red List of the International Union for Conservation of Nature (IUCN) and on national lists of conservation in areas intervened by the operations of Colombia and Central America. **Of these, six species are critically endangered, 14 endangered, 37 are in a vulnerable category, 17 are almost threatened, and 542 are of minor concern.**

## Principal Results

### Short Term (0 to 2 years)

- **We restored 570 hectares** of land by planting 1,700,000 trees with the ReverdeC Program, thus reaching 4,300,000 trees planted since the program began in 2016.
- **We planted 139,405 trees** and carried out the **maintenance on 223,081 trees planted** in 2018 on 573 hectares in 14 hydroelectric plants, within the framework of the agreements with the National Federation of Coffee Growers and the Water for Life and Sustainability Fund.
- **We carried out conservation activities for the Magdalena River turtle (*Podocnemis lewyana*)** at the Prado Hydroelectric Power Station, with the support of the Colombian Environmental, Agricultural and Agroindustrial Oxygen Association (installation of floating platforms for the turtles to rest), and progressed in Master's Degree research to obtain a Conservation Plan for the species.
- **We achieved 75% in the development of the breeding-in-captivity technology package** for restocking with shad (*Brycon meeki*), sabaleta (*Brycon henni*) and beardfish (*Rhamdia sajiaensis*), in cooperation with the University of the Pacific.
- **We carried out maintenance on 7,500 wax palms (*Ceroxylon quindiuense*)**, a vulnerable species (VU) according to the IUCN, and replanting 375 individual trees in 52 hectares, in six wooded formations in the Department of Tolima.

- **We achieved 95% progress in the formulation of conservation programs** for four threatened species of fauna and flora (the wax palm, Lehmann's frog, the poison frog and the Magdalena River turtle).
- **Altogether, 100% of the facilities have assessment and mapping for biodiversity**, taking into account an assessment of socio-environmental restrictions, environmental permits, Environmental Management Plans (EMPs) and Environmental Impact Studies (EIAs) of biodiversity and/or environmental license.
- **A total of 42% of transmission-and-distribution facilities have a forest census** and studies on biodiversity (this figure does not include electricity networks in the Department of Tolima).

## New Challenges

### Short Term

- Obtain two technology packages for the breeding of shad (*Brycon meeki*) and beardfish (*Rhamdia saijaensis*) in captivity.
- Evaluate the functionality of the fish-passage structure for the sabaleta species (*Brycon henni*) in the Tuluá River, Valle del Cauca.
- Finalize the formulation of the conservation program for the frog species *Oophaga lehmanni*, CR – IUCN; wax palm *Ceroxylon quindiuense*, VU – IUCN; and turtle *Podocnemis lewyana*, CR – IUCN; and start its implementation.
- Contribute 174 hectares of land for conservation, with its Management Plan in compliance, with compensation for an environmental license and an Investment Plan for 1% of the Alto Tuluá and Bajo Tuluá plants in Valle del Cauca.
- Continue the ecological restoration with wax palm (*Ceroxylon quindiuense*, VU - IUCN) and the isolation of six wooded relics in the area of influence of the Cucuana Hydroelectric Power Plant, in Tolima.
- Restore and compensate 50% of the areas intervened by the operation, maintenance and execution of new transmission and distribution projects, specifically on the high-, medium- and low-voltage lines.
- Complete the floristic characterization of 50% of the high- and medium-voltage-line corridors in Valle del Cauca.
- Implement a Biological Information System of ecosystems and the biodiversity associated with all our assets in Colombia and Central America, and a Geographic Information System for mapping and monitoring species of high value for biodiversity in the area of influence of our assets.
- Carry out the *in-vitro* propagation of flora species with a high conservation value.

## Glossary

### **Biodiversity**

According to the United Nations Convention on Biological Diversity, it is “the term by which reference is made to the wide variety of living things on Earth and the natural patterns it forms, the result of billions of years of evolution according to natural processes and also from the growing influence of human activities.” And it adds that biodiversity also includes “the variety of ecosystems and the genetic differences within each species (genetic diversity) that allow the combination of multiple forms of life, and whose mutual interactions with the rest of the environment base the sustenance of life on the world”.

(<https://www.un.org/es/events/biodiversityday/background.shtml>).

### **Mitigation Hierarchy**

A tool that helps to limit, as far as possible, the negative impacts on biodiversity produced by development projects. It is based on implementing best practices to avoid and minimize negative impacts on biodiversity and ecosystem services, managing residual impacts through restoration and compensation actions (<https://www.thebiodiversityconsultancy.com/es/approaches/mitigation-hierarchy/>).

### **International Union for the Conservation of Nature (IUCN)**

A union of members made up of sovereign states, government agencies and civil society organizations. IUCN is the world authority regarding the state of nature and natural resources, as well as the necessary measures to protect them

(<https://www.un.org/es/events/biodiversityday/background.shtml>).