

## CARBON NEUTRAL CLOSED LOOP

### BANANO, COST OF PIURA

The organic banana chain of Piura has more than 20 years of history and continuous export, this chain is made up of more than 9,500 small producers associated in the Piura Region that are grouped into 68 organizations in the Chira Valley and 6 organizations in Alto Piura, in the districts of Piura and Sullana, comprising about 10,000 hectares.

Around 10,800 containers are exported per year, around 200 containers per week, with an approximate value of US\$150 million. 95% of exports are planted, processed and exported from the Piura region, generating more than 20,000 direct jobs in the region, more than 30% of which are young people and 15% women, and having an indirect impact on more than 70,000 inhabitants, boosting the regional economy of northern Peru.

Year	2001	2022
Smallholder producers	1,000	9,465
Hectares	1,000	10,500
Smallholder unions	0	+60
Plots	0	+15
Containers	240	10,800
Exported boxes	0.4 MM	11.5 MM
Price FOB (per box)	\$5.46	\$13.0
On-farm price (per box)	\$2.0	\$5.4
Direct exports	0%	60%
Plastic waste		410 TM

Peru is one of the top two organic banana exporters in the world and is recognized for its organic, fair trade and Global Gap certifications.



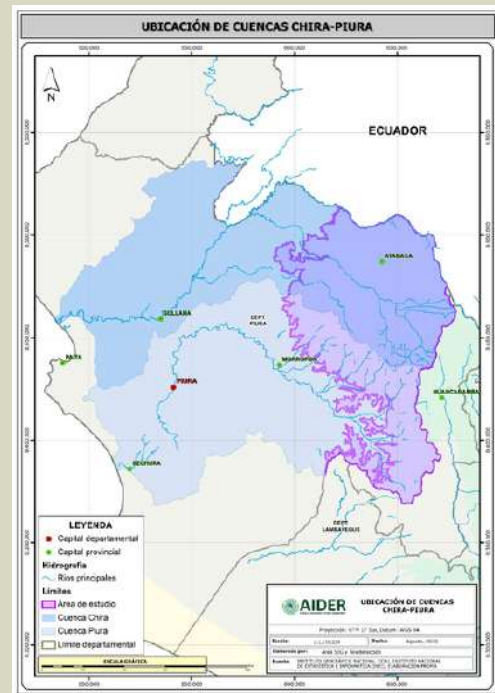
## ANDEAN COMMUNITIES OF PIURA

There are currently 28 conservation areas, led by communities, municipalities and the regional government. These efforts need to be recognized and strengthened, especially in the provinces of Ayabaca, Huancabamba and Morropón.

Agricultural expansion in the Piura Region is causing deforestation, affecting approximately 2,127,069 hectares of forest. Ninety-six percent of these forests are dry, occupying 60% of the department, while the remaining 4% is divided between mountain forests (3%) and inter-Andean forests (1%). These ecosystems are crucial for providing essential services such as firewood, water, and biodiversity conservation.

Piura has 75% of the Peruvian páramos, which are essential for water conservation and tourism activities in the Catamayo-Chira and Piura basins. The preservation of these ecosystems also contributes to maintaining cultural values. In addition, it is

responsible for supplying 40% of the water used in agriculture in the lower part of Piura, including bananas. The protection and sustainable management of these resources are imperative



## SHARED VISION

The purpose of this partnership between upper Piura and lower Piura is to establish a regional carbon credit market that promotes ecosystem services and fosters environmental and water sustainability.

This initiative offers banana producers the opportunity to access a specialized, high-value, carbon-neutral market, while the upper Piura region can benefit from the sale of carbon credits, which guarantees the necessary funds for its sustainability and protection. In this way, a sustainable business cycle is closed in financial, environmental and social terms.



Both communities experience significant benefits. The inhabitants of the highlands of Piura see their income increase thanks to the payments for conservation services, while they have the opportunity to diversify their productive activities and pay for their conservation and sustainability plans. At the same time, banana farmers benefit by accessing a specialized market niche and higher prices, in addition to securing the provision and supply of water, thus generating income and achieving sustainability in the chain

The reduction of climate impact and the preservation of the páramos result in benefits for all. This business relationship system on payment for environmental services is unique because it looks to the region itself to find solutions that benefit the high Andean communities and banana producers in the Piura chain, representing a clear example of shared value.

This system is novel and differs from other payment for ecosystem services models in that it ecosystem services because:

- Small-scale farmers are offsetting their footprint on an ecosystem they also depend on hydraulically in a region with high levels of water stress.
- The conservation of Piura's high Andean ecosystems is crucial due to the high rates of deforestation in recent years and the impacts on environmental services. This is despite efforts in recent decades and work with high Andean communities to protect these areas and diversify their sources of income.
- A relationship of recognition and social value is generated between culturally distinct human groups that inhabit the same region, but did not know each other.

This model can be replicated in other regions and with different products. Carbon neutral certification adds value to products such as blueberries, mangoes, lemons and grapes, offering the possibility of establishing a model to follow that generates a multiplier effect.

**CLICK HERE TO WATCH THE VIDEO**

## DATA

Collective action agreement for the carbon neutrality of the organic banana chain and conservation of forests and moorlands in the Piura region.

Agreement signed by 41 institutions and posted on the web. It has a work plan and an action plan (first version)



- The carbon footprint of organic bananas in Peru is lower than that of other competing countries such as: Ecuador, Costa Rica, Colombia, where it can be seen that, for 1 kg of banana produced, 1.27 kg of CO<sub>2</sub> are used in Ecuador, 1.35 kg of CO<sub>2</sub> in Costa Rica; while in Peru it is only 0.46Kg of CO<sub>2</sub>.
- There are 10 banana associations that already have their footprint measurement process.
- 4 banana exporting associations are in the process of verifying and purchasing carbon credits to achieve carbon neutralization.
- There is a carbon sequestration potential study for the highlands of Piura, which resulted in the feasibility of carbon sequestration ([Fact sheet](#)).
- A potential supply of 77,310 units of verified carbon per year has been estimated in the project area, which will cover the annual demand of the entire organic banana chain in Piura.
- Between 2001 and 2022, Piura lost 19,800 ha of its tree cover, which is equivalent to a 3.7% decrease in total tree cover. The province of Ayabaca is the province with the highest deforestation (5.7%), followed by Piura (4.3%), Huancabamba (2.5%), Morropón (1.5%) and Paita (0.9%). Between 2009 and 2020, 7,699.22 ha of moorland have been lost, with an annual rate of 1,539.84 ha.
- Average annual deforestation has been projected at 556.57 ha for the highland ecozone and 398.62 ha for the coastal ecozone.

## NEXT STEPS

- Strengthen the agreement, validate the roadmap of the collective action agreement and establish governance.
- Implementation of best practices to reduce the footprint and measurement of footprint reductions in the banana chain.
- Development of Project Design Document, including measurement of carbon footprint capture in the Andean communities of Piura.
- Scale up experience in measuring and validating carbon emissions in the banana chain.
- Identification or design of the financial mechanism that suits and respects the current conditions of the communities.
- Identification of sources to initiate the project.
- Design of communication strategy.

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More info



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