CONCEPTA ingredients

Ingredients: Measuring the climate benefits generated by the acquisition of raw material of non-timber forest production

EXECUTIVE SUMMARY

Concepta Ingredients is a division of the Sabará group, specialized in the development of natural and technological solutions focused on the food, beverages, animal nutrition and veterinary pharmaceutical industries. In order to conserve biodiversity and at the same time to make sustainable use of its products, Concepta has been marketing products of the Brazilian sociobiodiversity from agroextractivist origin since 2016.

Concepta's Sociobiodiversity Project has a look from the supply to industry and involves, among other products of its line, two with Amazonian origin: Brazil nut oil and *cupuaçu* butter, produced respectively in the municipalities of Juruena, in the state of Mato Grosso, and Porto Velho, in the state of Rondônia. Both come from certified organic sources.

Sustainable extractivism of non-timber products depends on forests and agroforestry systems, their fruits and seeds to support the income of provider families, and, thus, to contribute to the maintenance of the standing forest. In this context, this study seeks to measure the benefits related to global climate regulation corresponding to the acquisition of raw material from non-timber forest production in the next five years, considering that this activity avoids the emission of greenhouse gases by deforestation in the supply areas.

As the objective is to make a projection of how Concepta's work with extractive communities can avoid deforestation in the area, the analyzes were conducted considering a five-year projection using secondary data from the Project of Deforestation Monitoring in the Legal Amazon (PRODES, its Portuguese acronym) for the municipalities in the Amazon biome.

The valuation of the externality was based on the Replacement Cost method (RCM), considering the Social Cost of Carbon (SCC), which represents the estimated cost of the probable impacts - due to the addition of one ton of carbon in the atmosphere - in agricultural productivity, human health and infrastructure. It was considered that, if there were no extractive activity, the most likely occupation would be pasture for livestock farming, which would generate approximately 17,020 tons of carbon equivalent (tCO_2e) per year.

The results obtained demonstrate a positive externality of approximately R$ 10 million, in terms of avoided deforestation, due to the use of land for agroextractivist activity.

The results of this study will be used in the communication of the products and for monitoring in the coming years, comparing the projection of this study with the real effected. Although this case contemplates only one of the ecosystem services provided by standing forest maintenance, it is already possible to have a dimension of the importance of such actions, and may in the future have its analysis expanded to include other benefits.

Reporting of dependencies, impacts and environmental externalities

Responsible for completing: Thais Emilia Hiramoto

Project drivers

Goals: Understand the business relationship with ecosystem services.

Description: Measure the climatic benefits generated by the acquisition of raw materials from non-timber forest production, considering that the reduction of deforestation occurs in the supply areas and, consequently, avoid the emission of greenhouse gases. Currently, valuation is sought as a decision tool at strategic and operational levels in the acquisition of raw materials and expansion of collection areas.

Project scope

Object of the project analysis: Project.

Description: Primary forest areas in agroforestry systems in the Amazon biome.

Geographic Area: 2 municipalities, Juruena, in the state of Mato Grosso, and Porto Velho, in the state of Rondônia.

Step(s) of the value chain included: Upstream (suppliers).

Type of approach: Prospective.

Time Horizon: Projection in five years.

Ecosystem Services: Global climate regulation.

Global climate regulation

The role played by ecosystems in carbon and nitrogen biogeochemical cycles, thus influencing emissions of important greenhouse gases, such a CO_2, CH_4 and N_2O.

Method(s) used: Replacement Cost Method (RCM).

Results

Externality: approximately R$ 10,2 million

Data used	Type of data
Avoided deforestation	
Biome phytophysiognomy and land use: Open Ombrophilous Submontane Forest ; potential land use: pastures.	Secondary
Avoided deforestation, in hectares: 269 ha.	Secondary
Deforestation rate considered as base line: 0,63% in Juruena; and 0,74% in Porto Velho.	Secondary
Deforestation rate with the project: 0,10% for both regions.	Estimative
Avoided emissions, in tCO_2e: 85.102,81 in five years.	Secondary

Further information

Exchange rate used to convert the Social Cost of Carbon (CSC) into Brazilian Reais: R$ 3.16, as of the date of completion of the tool (December 08, 2017).

Assumptions adopted in the valuation estimates: Project duration time: five years. Rate of deforestation at the baseline based on the average of the last 10 years of deforestation increment in the target cities. Deforestation rate with the project: considered 0.10%. Most likely use after deforestation: conversion to pasture is the most likely in the areas considered and in the Amazon as a whole.

Adjustments or derivations applied to the methods and tools used: N/A.

Others: N/A.

Explanatory Notes: The data on deforestation rates for the last 10 years were collected using the Prodes. Five years of project were assumed, considering the line of sociobiodiversity products reaching maturity in commercial terms in that period. The areas considered were informed by the supplier partners and are located within the municipalities evaluated in PRODES.

Analysis of the results

Although relatively small areas, considering the land status in the Amazon, these areas comprise important projects of considerable success according to the biodiversity conservation combined with the social benefit for the involved members. For this, there is a need for an established market that absorbs these products and that helps the forest to continue as a productive and economically viable asset.

Based on the above assumptions, in five years, 3% of the total area would be deforested in the absence of the project, in both regions, which represents approximately 73 thousand tons of CO_2e in the municipality located in Mato Grosso; and 12 thousand tons of CO_2e in the case of the municipality located in Rondônia. The presented externality is significant: around R$ 9 million in the region supplier of Brazil nuts, and R$ 1 million in the region supplier of cupuaçu.

Management of ecosystem services

Use of ecosystem service valuation results: Social and environmental impact assessment.

Description: This evaluation is an initial projection of the potential impacts generated by the acquisition of products of agroextractivist origin. In this way, the intention is to monitor them and monitor the performance of the project, using these numbers as indicators and components for decision making in relation to volumes and products marketed, location of projects and target markets.