

DESARROLLO LOGÍSTICO INTEGRAL EN COLOMBIA: APUESTA POR FORTALECER EL PRIMER TRAMO DE LA LOGÍSTICA EN EL AGRO, CASO CIÉNAGA DE LA ZAPATOSA, CESAR

Juan Carlos Manga Cadena
Lina Marcela Prieto Vega
Gabriel Steven Riascos Castro



Table of contents

01

INTRODUCTION

02

STATE OF THE
ART

03

PROBLEM

04

OBJECTIVES

05

METHODOLOGY

06

PROPOSAL

07

RECOMMENDATIONS
AND LIMITATIONS

08

CONCLUSIONS

Introduction

The ecoregion of Zapatos's swamp is a protected area by the State, being the national widest continental wetland in Colombia

- Its area ranges from 36.000 Ha2 to 50.000 Ha2 (Fluviala & Alexander von Humboldt Institute, 2015)
- The region shares its borders with Cesar and Magdalena departments (Idem)
- Approximately, there are 150.000 inhabitants in this region (De la Hoz, 2008)

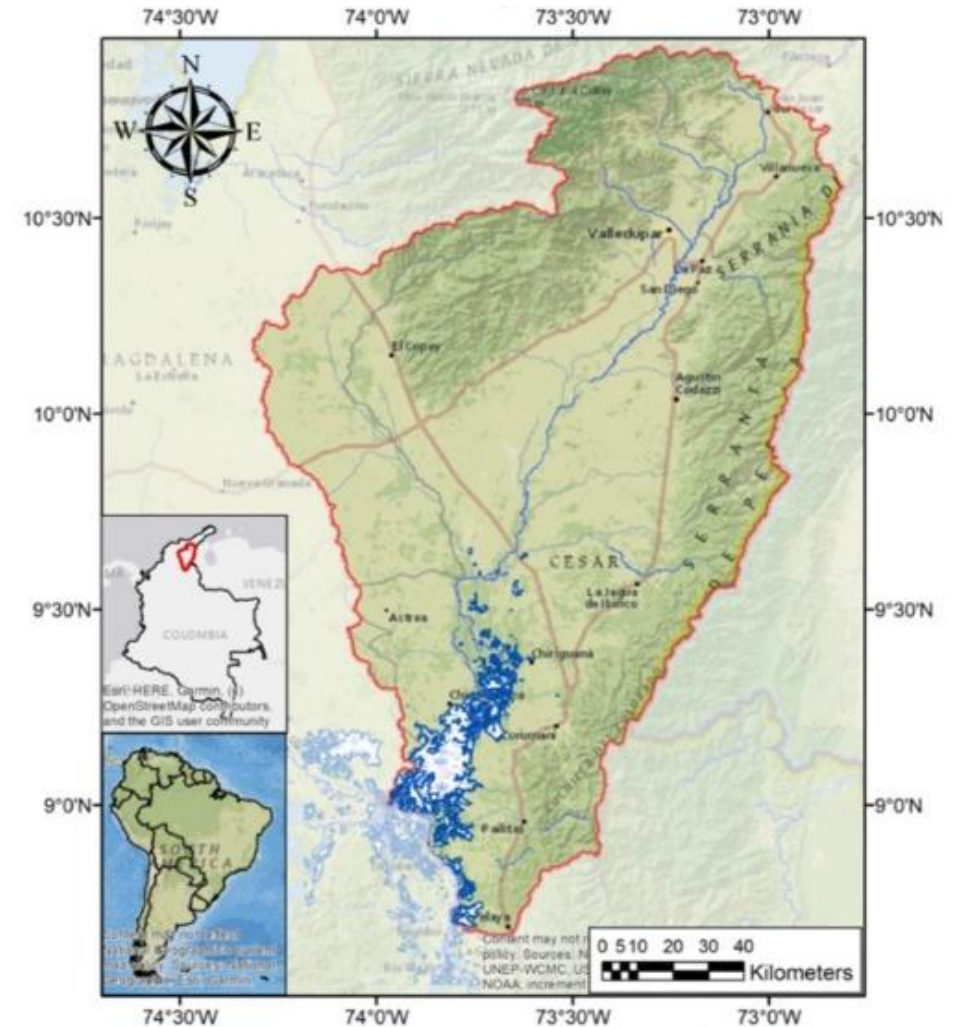


Fig. 2: Zapatos's swamp map, obtained from [Natura.org](https://www.natura.org) (2020)

Introduction

The region is strongly related to the petrol and hydrocarbon industry; nevertheless, other activities, such as livestock and tourism, are developed within the territory

- Cesar has a 1,96% of participation in the composition of the national GDP (Idem)
- This department is in 22nd place on the Departmental Competitiveness Index (Cesar governorate, 2020)
- Agricultural activities are developed exclusively to meet local needs.

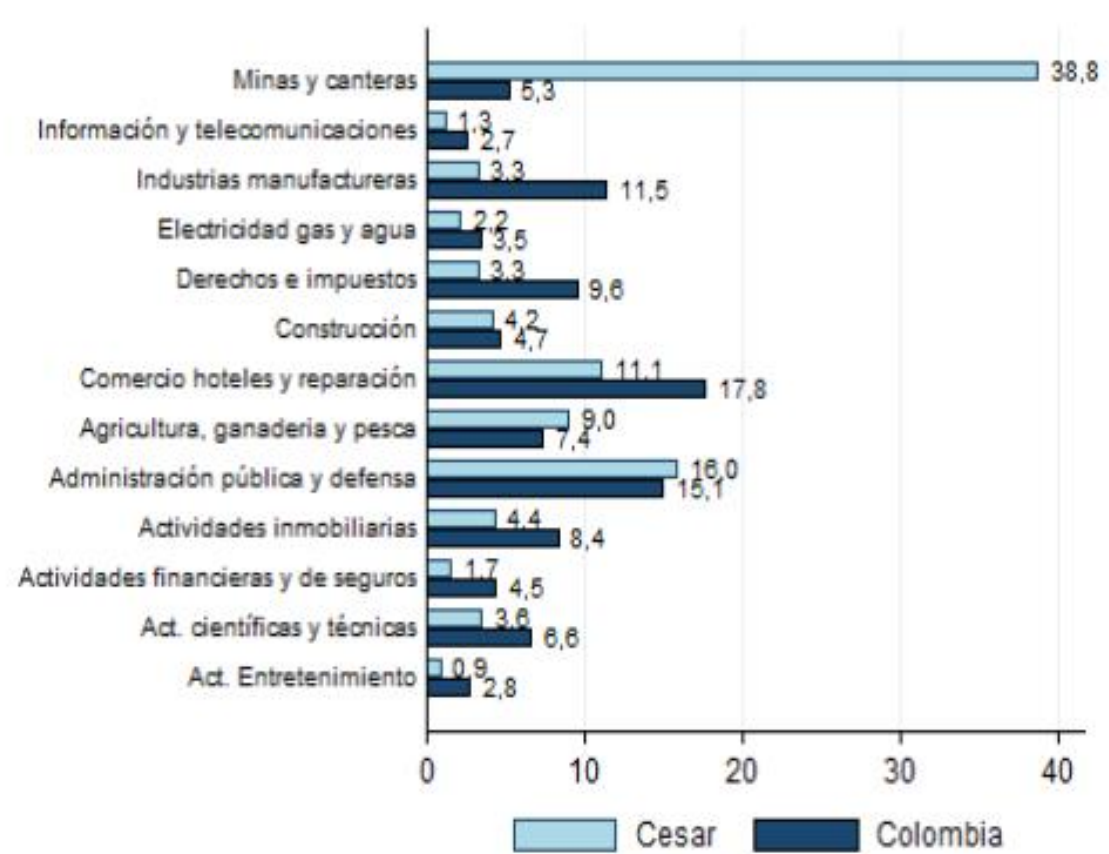


Fig. 3: Sectorial composition of the departmental GDP. MINCIT (2021)

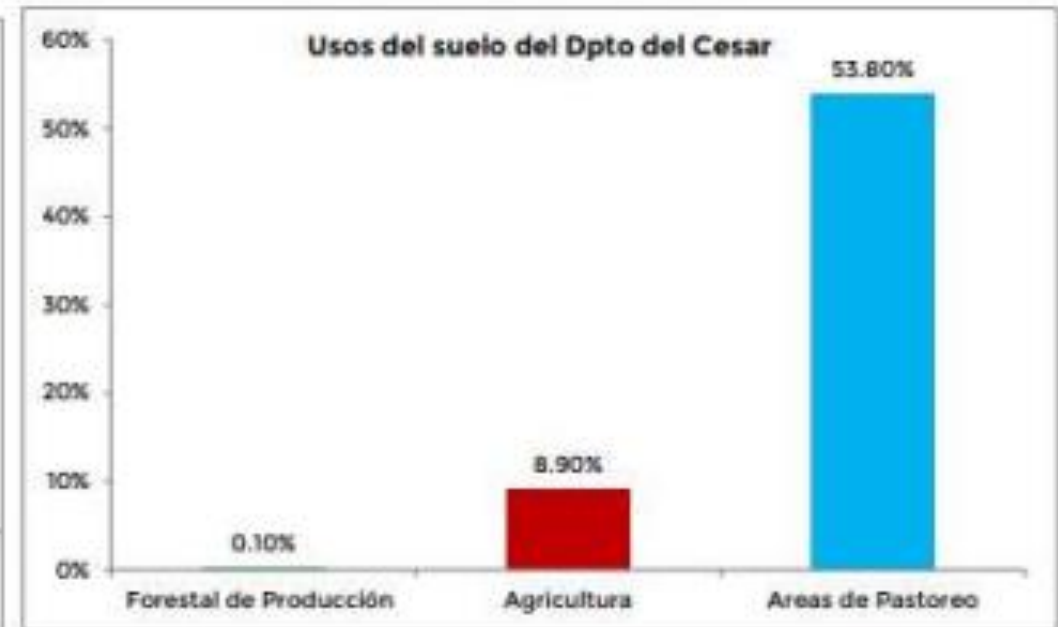
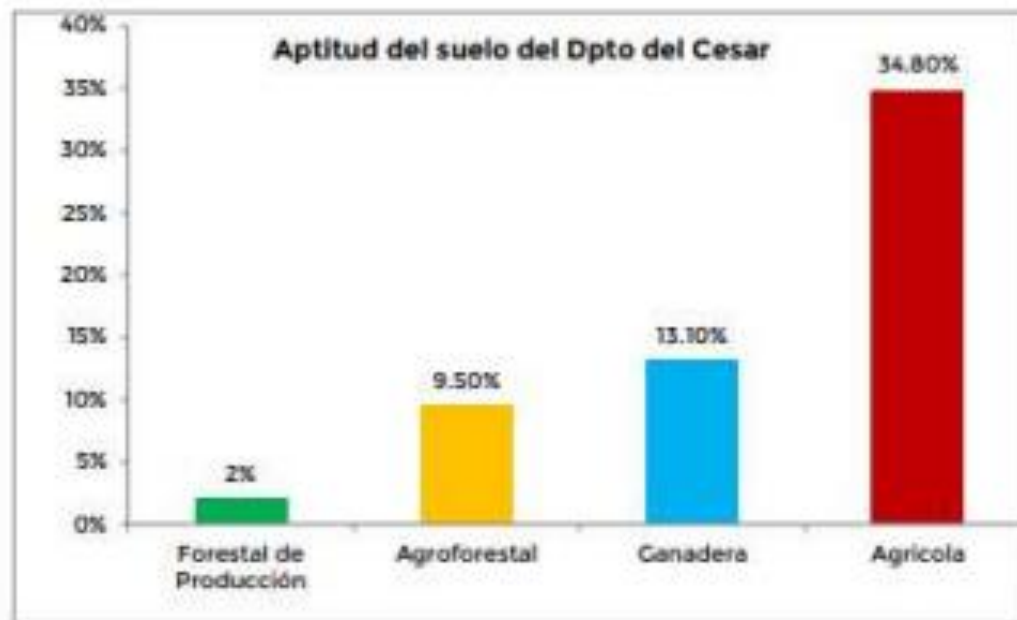


Fig. 3: Soil aptitude versus soil use into Cesar Department. Cesar Governorate (2020)



Approximately half of the population has no access to the Internet (DANE, 2021)

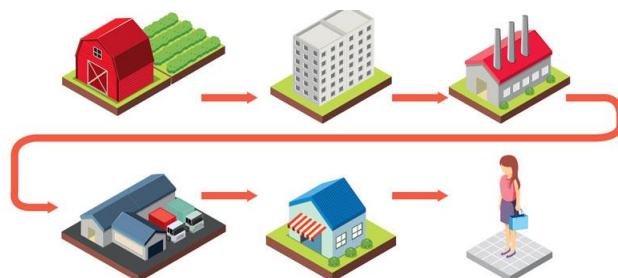


Academic programs related with logistics are not enough to satisfy the departments demand (MinEducación, 2017)



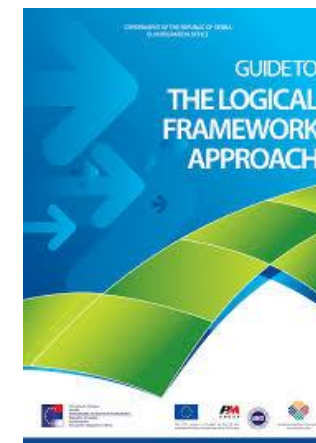
The region has potential to increase its agricultural production (Cesar Governorate, 2020)

State of the art



Good logistics practices and adaptive supply chain (CEPAL, 2019)

Short supply chains allow local food systems to be resilient and diversify the rural economy (A. Markuszewska, 2012)



The logical framework approach facilitates the process of conceptualization, design, execution and evaluation of projects (CEPAL, 2005)

Problem identification

The local community of Zapatosá's ecoregion has not implemented techniques, tools, and logistic methodologies to increase the competitiveness of agricultural production.

- Together, unequal conditions and State neglect are some of the causes of this problem.
- As a result, previous reasons affect the agricultural departmental competitiveness and product quality.

Objectives

Main objective

Present an accompaniment plan and an integral education program to improve logistic management in the post-harvest process.

Characterize the population as well as the stakeholders

Identify the socioeconomic problems that affect the community

Design, propose, and present strategies, tools, and instruments that contribute to increasing the logistic performance

Specific goals

Methodology

Qualitatively focused non-experimental design (Hernández-Sampieri, 2014).

1. State of the art and contextual framework



Current logistics processes used in lemon handling (NTC 4087).



Literature review.

2. Project formulation



Logic marc (CEPAL, 2005).



Problems tree.



Stakeholders análisis.

Stakeholders

Farmers



- Inhabitants of Ciénaga de la Zapotosa.
- No education or guidance on logistics.

Conveyors



Cargo is transported by people, pack animals, bicycles or motorcycles.

Collectors



Reception, storage and preparation of agricultural products.

Citrus is the only product that has a collection center.

Local merchants



- People who sell the products.
- No education or guidance on logistics.

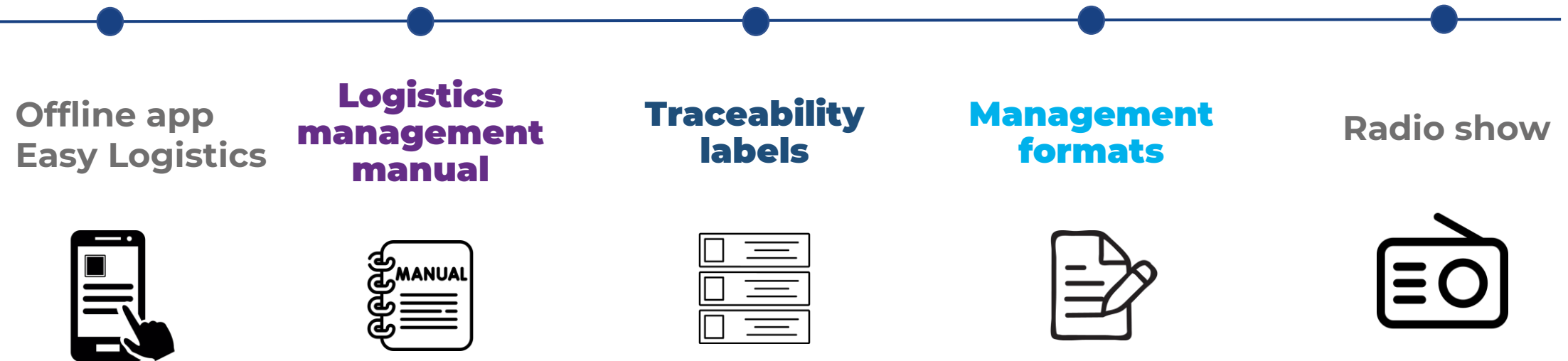
Government institutions



Generate, coordinate and control the regulations and norms of the territory.

Proposal

Comprehensive program that guides and facilitates the logistical management of lemon in the postharvest.



Offline app Easy Logistics

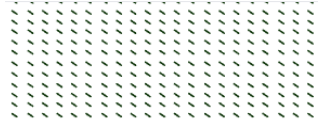


¿Qué tipo de información buscas?

-  Normativa
-  Guía de manejo logístico
-  Recomendaciones
-  Preguntas frecuentes
-  Información de contacto

Empecemos

Logistics management manual



El manual
del limón



Traceability labels



PRODUCTOR: _____

DIRECCIÓN: _____

NOMBRE DEL PRODUCTO: _____

PAÍS DE ORIGEN: _____

REGIÓN PRODUCTORA: _____


FECHA DE EMPAQUE: _____

PESO NETO: _____

CATEGORÍA		
EXTRA	1	2

CALIBRE				
A	B	C	D	E

COLORACIÓN						
0	1	2	3	4	5	6





Management formats

Excel spreadsheet that forecasts demand using 3 stochastic methods (LS, SES, SDS) and implements the Silver-Meal heuristic.

Radio show

- Share logistics news, regulations, strategies and recommendations.
- It recognizes the farmers who are part of the program.

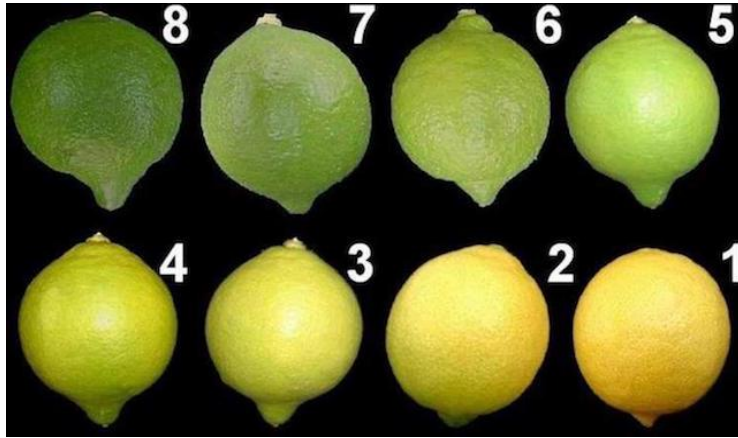
Recommendations and limitations



Can be scaled to all products grown and produced in the region



Active participation of the government in the dissemination of the program



Have information on the quality requirements demanded by the market



Have more collection centers in the área and give a feedback to management tools

Conclusions

- Implement projects that articulate the State-Academy-Industry triad.
- Reduce as much as possible the existing social gaps caused by inequality, guaranteeing that the majority of the population has access to the programs.
- Logistics is an area that can cause a significant impact for the population.
- Government entities and responsible agencies must commit to the nation and develop programs that allow the development, advancement, and growth of the regions.

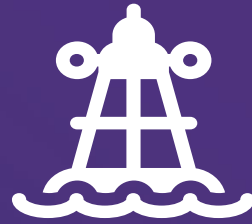
Gratefulness



Under the royalty project: Desarrollo, transferencia de tecnología y conocimiento para la innovación para la reactivación económica y soberanía seguridad alimentaria derivadas de la emergencia económica, social y ecológica causada por el COVID-19 en ciénaga de la Zapatosa-Cesar BPIN 2020000100730 - SGR SGIP: 80991

References





THANK YOU!