



**Study of the logistical obstacles that the Banana Exporting  
Companies have in the Port of Urabá**

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## Summary

This thesis is focused on the study of the obstacles that banana exporting companies have in the port of Urabá, to publicize the process and the difficulties in this and to find recommendations to improve these shortcomings.

As a fundamental basis for the development of this project, it was decided to carry out research on the sector, relevant data and fundamental characteristics such as the geographic location, the state of the infrastructure and the costs that the companies that use this port should count

This port has a privileged location which helps to reduce costs, but the infrastructure and technology is not up to the task to carry out the operations desired by the exporters.

As the main objective of this research, we have to find the biggest obstacles and shortcomings in the port, so that not only banana exporters, but exporters of other products can privilege this port. The port of Urabá can represent an economic increase for Colombia, mainly the department of Antioquia, all if the main roads and infrastructure of the port are improved so that it can compete at the level of the main ports in Colombia.

### Keywords:

- **International Business**
- **The Puerto Antioquia**
- **Logistics**
- **Export of bananas**
- **Infrastructure**
- **Logistics obstacles**

**Abstract**

This thesis is focused on the study of the obstacles with banana exporting companies that use the port of Urabá, make known the process and the difficulties in this and find recommendations to improve these shortcomings.

As a fundamental basis for the development of this project, it was decided to carry out research on the sector, relevant data and special characteristics such as the geographic location, the state of the infrastructure and the costs that the companies that use this port should count on.

This port has a privileged location which helps to reduce costs, but the infrastructure and technology are not up to the task to carry out the operations desired by the exporters.

As the main objective of this research, it is to find the major obstacles and shortcomings with which the port has; thus, not only banana exporters, but also exporters of other products can privilege this port.

The port of Urabá can represent an economic increase for Colombia, mainly the department of Antioquia; All this, if the main roads and the infrastructure are improved so that it can compete in international business at the level of the main ports of Colombia.

**Keywords:**

- O International Business
- O The Puerto Antioquia
- O Logistics
- O Export of bananas
- O Infrastructure
- O Logistics obstacles

## Content

<i>Introduction</i>	13
<i>Project Formulation</i>	14
<b>1.1 Background</b>	<b>14</b>
1.1.1 Research Subquestions	19
1.2.1 Theoretical Justification	20
1.2.2 Social Justification	21
1.2.3 Personal Justification	21
1.3.1 Overall Objective	22
<b>1.4 Methodological Framework</b>	<b>22</b>
1.4.1 Method	23
1.4.2 Methodology	23
<b>1.5 Reaches</b>	<b>24</b>
<i>Project Execution</i>	25
<b>1.6 Theoretical Framework</b>	<b>25</b>
1.6.1 Generalities	26
1.6.2 Banana Exportation	28
1.6.3 Urabá Port	29



Abstract	IX
1.6.5. Infraestructura y ubicación	32
1.6.6. Costs	35
<i>Findings</i>	46
<i>Conclusions and Recommendations</i>	50
<b>1.7 Conclusions</b>	<b>50</b>
<b>1.8 Recommendations</b>	<b>51</b>
<i>Bibliographic references</i>	52
<i>Annexes</i>	55

**List of Figures**

<b>Figure 1. Distances between ports</b>	<b>27</b>
<b>Figure 2. Phase I</b>	<b>41</b>
<b>Figure 3. Phase II</b>	<b>41</b>
<b>Figure 4. Phase III</b>	<b>42</b>
<b>Figure 5. Pier Nueva Colonia Turbo</b>	<b>48</b>
<b>Figure 6. Transport of the bongos towards the ship, Turbo</b>	<b>49</b>

**List of Tables**

**Tabla 1. Banana exports in Colombia 2014 - 2015** \_\_\_\_\_ 28

**Tabla 2. Costs Ground Transportation** \_\_\_\_\_ 37

**List of abbreviations**

**ANALDEX**: National Association of Foreign Trade

**CI**: International Distributor

**DANE**: Departamento Administrativo Nacional de Estadísticas

**FARC**: Fuerzas Armadas Revolucionarias Colombianas

**KM**: Kilómetros

**SAS**: Sociedad Anónima Simplificada

**TEUS**: Twenty-foot Equivalent Unit

**TIC**: Information and Communication Technologies

**UFC**: United Fruit Company

**USD**: United States Dollar

## Introduction

They will then find an investigation done; to determine the main logistical obstacles in the banana export process from the port of Urabá; in this one, the relevant variables and data of the process and the area in which it is operated are widely reported.

Within the above information, you can find the history of the department of Urabá also of the exporting companies operating from this region and the obstacles presented in the process of shipping the goods abroad; Focused on the costs of internal freight, logistical resources in the port and resources in road infrastructure, on the other hand mention the projects that are advancing in the region to overcome these barriers, which are the reform of Puerto Antioquia and the construction of 4G pathways, or pathways of prosperity.

In addition, they will be able to determine the advantages for banana exporting companies with these projects and the positive impact that these generate in the operation, we related some relevant information obtained from official and scientific sources regarding this subject.

Attached is an interview which was very helpful for this research work and which at the same time served as a tool to get an idea of the obstacles that can be presented in the banana export for companies that make use of this port. Which had not been contemplated. They mention some problems like; pollution of the burden of armed groups outside the law, and situations of insecurity for employers, which lies in the location of the port because of its ease of access routes, it is see Vulnerable to the export of drugs driven by these armed groups.

## Project Formulation

### 1.1 Background

#### **Independence and Colonization (zone Urabá)**

In the nineteenth century, during the first years of independence, three governmental entities (Popayán, Cartagena and Antioquia) claimed jurisdiction over the valleys of the lower Atrato and Urabá. However, none of them struggled to colonize. According to (Ceballos L. f., 2007)

The rubber trade and the collection of seeds attracted the migration of blacks from the Choco to the jungles of Urabá, initially these happened in this place only the harvest season the Which was exploited by Americans, for export to Europe and North America, however after a time of exploitation, the collectors settled permanently in the region, "one of the great unknowns for the exploiters of these lands; Was whether they would allow a forest as productive as that of Urabá to be laid by the colonists "(Ceballos L. f., 2007)

As the resources of this land were exploited, and the population saw the exhaustion of their raw materials, they opted to clear the forest, in order to plant corn, potatoes and other supplies for their own food, Urabá was a place that did not have much government presence in terms of security, which caused an opportunity for drug traffickers and pirates, who began to operate from this area, this would trigger civil and security problems, it all comes down to political-military colonizing movements , Associated with territorial control by armed groups outside the law, such as the guerrillas and the paramilitaries, which has caused Urabá to be one of the most violent regions in the country.

At the time of economic opening, one of the issues to be improved would certainly be logistics, since at that time the country did not have enough logistical resources to be competitive in the market, Colombia had a deficit in infrastructure . Since then, the government has been forced to focus on operations such as: identifying and resolving bottlenecks created by transport, whether at national or international level, where maritime, terrestrial or air transport interact, promote the intensive use of Regulate ICT systems in ports and airports to facilitate the passage of goods, promote research, development and strengthening within organizations, in order to generate reverse logistics strategies in the different sectors that make up the economy, the provision of a single window which integrates the supply chain areas, which promotes intermodality, with the support of ICTs that facilitate trade, generate added value and adopt better logistics and transport practices at the international level. (Torres, 2013)

### **Antecedents of Banana production in Urabá**

Interest in the region was increasingly accentuated, both by the government and national investors, and by foreign capital, which from the previous century had extracted and commercialized Urabá products through enclave economies. As early as 1909 the Albingia consortium in Hamburg (Germany) had obtained a concession of 5000 hectares for banana planting. It made a high initial investment, then estimated at 2.5 million dollars, which included port rail, processors, etc. However with the inception in 1914 of the First World War, the Germans abandoned the project and the region (Ceballos L. f., 2007).

Only with the completion of the road from Medellin to Urabá and with the arrival of the company United Fruit Company - UFC-, the economic development of the Agroindustry in the

Urabá Antioqueño. The UFC, a company that controlled not only the commerce but also the banana plantations in Santa Marta, began in 1959 an impulse program for the agroindustry of Urabá, through the fruit company subsidiary of Seville. His interests were based on the fact that the region was outside the Caribbean hurricane belt, he was free of the Panama fungus and why he could change his administrative system that had caused so much conflict in Santa Marta to deal only with the commercialization Of fruit and leave in the particular owners of the farms and the labor relation with the workers. (Ceballos L. f., 2007).

Colombia's banana production is divided into two zones, Santa Marta and Urabá Antioqueño, for the 1990s, production in both regions were very similar, however in the middle of the decade, the region of Antioquia presented a rising figure in Hectares of banana production compared to that of Santa Marta, which resulted in 70% of the country's banana exports to the rest of the world, Santa Marta had only a 30% share. Preferential location of Urabá since it connects the 4 main roads of the country and for the differential management that could be given of the companies in this.

In 1964, the first banana exports began. And from this moment begins the growth of the banana zone, whereby 850,000 tons of exports are shipped per year, making the port of Urabá one of the most important in the country. (Arbeláez, 2014)

The loading of the merchandise to the ship is done using barges, since it is not possible for the ship to enter the dock, by the depth of this port, which has a depth of 10 meters, which is not optimal for postpanamax vessels; which require a minimum depth of 13mts.



### 1.1.1 State of Art

According to (Legiscomex, 2013), the project that advances the construction of the port of Urabá, is totally viable, in this one; Is involved both the State and private companies, since they recognize the advantages in the location of the port, which they call as "the best corner of America" additionally the cost advantage of transportation and foreign trade processes, which would greatly benefit Companies, including banana companies, have raised several factors to take into account at the time of construction as they have been; The depth of the port, so that post panama ships can access and the subject of technological equipment to make more effective the loading and unloading of the merchandise. The Port of Urabá will be specialized in the import and export of bulk cargoes, fruits, manufactures, heavy cargo or liquids from the department of Antioquia, the Atlantic Coast, El Cafetero and Bogotá.

In addition, one of the mega projects that are ahead are; 4G roads or roads of prosperity, this project seeks to connect the four main cities of the country, achieving optimization in time and costs very significant. When it has completed the port of Urabá can connect with the cities of the interior of which about 70% of the products are exported. (Rodríguez, s.f)

According to Juan Camilo Restrepo, president of AUGURA, the banana guild is striving to articulate its processes in a way that allows them to be more competitive in the foreign trade processes. There is a large market for the export of this product basically in Europe and the United States, some of the biggest obstacles have been presented in the production process, due to climatic causes such as the phenomenon of the child, in addition to the exchange rate The Colombian economy, in the last 10 years, which was not in favor of the exporters, and finally the truck

stoppages, which caused a great affectation to this deal. With this transport guild have had some agreements in order not to negatively impact exports and so far have been fulfilled.

The port of Urabá is with a very positive vision this seeing it from the point of sustainable development and road and port infrastructure. Compared to the other main Colombian ports, this port is in a state of positive curve in terms of the advances that can bring.

The Port of Buenaventura has 14 springs that have a length in linear meters of 1998 and are designed under the multipurpose specialty discussed above.

For storage it has 13,119 m of covered warehouses, an import and export capacity of 27,044 m<sup>2</sup>, a yard capacity of 48,000 m approximately, a solid bulk capacity of 164,000 tons and 230,000 m<sup>3</sup> for liquid bulk (Procolombia, 2015).

The port of Cartagena has 8 springs have a length in linear meters of 1,636 with the specialty in containers. For storage it has 5 covered warehouses, a capacity for import and export of 30,000 m<sup>2</sup>, a capacity of yards of 22 hectares, a capacity for solid bulk of 20,000 tons and does not handle liquid bulk (Procolombia, 2015).

To ensure that companies survived globalization and foreign trade; Must be competitive in logistics, customs and export costs in order to bring attractive prices to different markets, this is one of the obstacles for banana exporting companies operating in turbo, since although the turbo port up According to (Rodriguez, Biblioteca epic virtual, sf) it is projected that over a period of 10 years, the capacity of the port will be exceeded, taking into account the growth of International operations. One of the most worrisome issues for the companies of our country is the road and fluvial theme of the zone, since the port is in shallow waters, which conditions the ships that are

going to arrive, until the moment only small ships of 22 thousand tons. Several alternatives have been proposed for the fluvial problem of this bay, however, none has been materialized by the costs that would bring about the projects presented. With this research we seek to find the best alternative, to improve the logistic processes for the export of bananas in this port and to project it to last in time, taking into account the growth of international markets.

Due to its geographical position, Urabá has become a suitable corridor for the transport of illegal drugs. The main exporters are some of the demobilized paramilitary ranks, who continue to commit delinquency in a new modality that has to do with threats to land claimants. (Garcés Albornoz, 2016)

### **1.1.1 Research Subquestions**

- What consequences can it bring to the export of bananas, the lack of logistical resources in the port of Urabá?
- How has the evolution of the export of bananas, in the handling of merchandise from the port of Urabá?
- What would be the best option to minimize costs to banana exporters in the port of Urabá?
- What are the geographical and logistical advantages that banana exporting companies in the port of Urabá can take advantage of in order to penetrate foreign trade more easily.

## **1.2 Justification**

The study will be a tool for exporting banana companies from the port of Urabá. It highlights the current obstacles to foreign trade for this area and some of the advantages that can be exploited to break down the trade barriers that are currently evident. This study is important for product exporting companies, interested individuals or investors who wish to validate the viability of investing with this product from this area.

### **1.2.1 Theoretical Justification**

The research is important for its investigative contribution, to the entrepreneurs or interested in the export of bananas from the port of Urabá, focusing basically on the possible obstacles that are presented for the companies to make their exports from this place, the content of the study can contribute to a better decision to exercise this activity from this area and to mitigate any obstacles or obstacles that may arise in this process, and the actions to be taken to put an end to these failures and thus to achieve exports from a strengthened port and With all the capacities to be one of the main in Colombia, also mention some of the most relevant advantages for this type of export, which can be considered by the companies or individuals interested when doing a business.

### **1.2.2 Social Justification**

Through the study you can get an idea of the environment, history, social and commercial history and evolution that has had the area in which the port of Urabá and its banana companies are located with which you can have a geographical, demographic and cultural idea. Which is important to know before doing any type of business.

### **1.2.3 Personal Justification**

The study carried out is of paramount importance for our professional career; As it helps to expand our knowledge, to understand factors that must be evaluated when making decisions in a company that carries out foreign trade processes and finally to be aware of important projects that are being done in the country and that can be Used by companies to reach international markets in a more competitive way.

## **1.3 Objectives**

### **1.3.1 Overall Objective**

Identify the logistical obstacles that Colombian companies exporting bananas users of the port of Urabá have today, and offer some recommendations regarding the problems found in this port.

### **1.3.2 Specific Objectives**

- Identify the logistical obstacles that Colombian companies exporting bananas users of the port of Urabá have today, and offer some recommendations regarding the problems found in this port.
- Detect and analyze the main logistical obstacles that occur in a banana export from the port of Urabá.
- Indicate the main recommendations that can be given to this research, taking into account the obstacles encountered and the shortcomings of the banana export process from the port of Urabá.

## **1.4 Methodological Framework**

The research is being tackled taking into account both historical and current information, extracted from official sources; Such as the Ministry of Transport, Fedesarrollo, Ministry of Industry, Tourism and Commerce, scientific articles, newspaper articles and later an interview

with the personnel directly in charge of one of the banana exporting companies based in the city of Medellin and which uses The port of Urabá for its exports, the theme of Transportation, time of delivery of goods, infrastructure and cost of freight.

On the other hand, it will be a mixed research, based on both the quantitative and the qualitative. (Gualdrón).

### **1.4.1 Method**

To start with the investigation, we will start with some relevant variables such as the number of banana exporting companies in the country, then the logistics costs incurred by a company to develop this activity, identifying the projected freight value and delivery times of Their merchandise, then we will make a statistical comparison, which will be projected, of the logistic development of the country after the completion of the 4G routes and the port of Urabá, being analyzed from the position occupied by Colombia in the logistic infrastructure report of the bank Worldwide, which will help us to identify the competitiveness we have vis-à-vis other countries.

### **1.4.2 Methodology**

Initially an extensive investigation will be carried out through the internet, related books and databases that the companies related to the import of bananas through the port of Urabá, and whose main headquarters is Medellin, will be contacted. One or two companies to which they can make a brief interview and let us know the process of exporting said product.

With the information obtained from the interviews, an analysis of the procedures performed in the export in the port of Urabá and the obstacles presented by each of the companies will be made, so that we can obtain accurate and truthful information about the obstacles and shortcomings that can be presented.

The information obtained in the interviews can be indicated that it is firsthand, but it must be taken into account that only one side of the process is heard, so it is necessary to complete the information required by means of precise investigations at the port of Urabá.

### **1.5 Reaches**

The research work will be carried out by means of an analysis of the banana exporting companies in the port of Urabá in an average time of 5 years ago. This will identify the improvements and shortcomings in the export processes through this port and what would be the best alternatives for Colombian companies producing bananas. This work draws on information from the last 10 years.



## **Project Execution**

### **1.6 Theoretical Framework**

When a company wants to start exercising as an importer or exporter in Colombia, one of the aspects that must be taken into account is the economic sustainability that allows it to assume the logistical and customs costs, taking into account that in this country these costs are high and the processes are arduous, many companies that are growing cannot exercise abroad because their economic capacity does not give them to take care of these processes, these obstacles can bring impacts to the economy of the country, since they are not Perceives a growth in the industry.

Colombia is in a constant attempt to improve the roads, tunnels, credit supports to growing companies, there is a 4G road project, which has high expectations for entrepreneurs, but all this is opaque with failures in The logistical processes in the ports and airports of the country, since the time and costs saved in transport become minimal compared to the delays in the loading and unloading and the costs of the logistic processes, all these processes can double in Time and costs with the travel.

As indicated by the National Department of Planning DPN (2015) through its "Colombia es logística" survey, the main barrier detected in logistics in Colombia is the process of loading and unloading at the terminals (32.3%), followed by infrastructure and congestion (22.2%).

With the data mentioned above, it is demonstrated that the main obstacle that Colombia has at the moment of importing or exporting is in the processes in the transport terminals, since they do not have an infrastructure according to the needs that are presented; The delays that haulers must assume in ports are so high that it takes away competitiveness from other countries.

### **1.6.1 Generalities**

Urabá is bordered to the north by the Caribbean Sea, to the east by the department of Cordoba and by the west, to the south by the department of Choco and by the regions of the southwest and west, and to the west by the department of Choco.

The port of Urabá holds a great power in economic, social and exporter level of the region, since it has a privileged geographical position, it is on the Atlantic with an average of 20 meters of depth, has been producing since 1969 with a channel Artificial that ties the mouth of the Lion River.

The biggest products to be exported are bananas and bananas, candies, and ceramics and they import resins, cotton, paper, inks, among others. This port has been mainly managed by banana exporting companies, but there are projects through national government to promote the union of other companies and promote the development of the port of Urabá.

One of the most important aspects of the port of Urabá is the distance it has with other ports, which helps to reduce transport and logistics costs for exporting and importing companies, bearing in mind that Colombia stands out for having high costs in Transport processes. In figure 1 we can see the distances from the port of, Urabá to the main cities of Colombia, making a comparison with the main ports.

Urabá to the main cities of Colombia, making a comparison with the main ports.

**Figure 1. Distances among Ports**

PRODUCTION CENTER	DISTANCES (km)				
	*Turbo (Nueva Colonia)	Cartagena	B/quilla	Sta Marta	B/ventura
Bogotá	739*	1.101	1095	970	593
Medellín	340*	643	708	858	465
Cali	779*	1012	1130	1218	214
Bucaramanga	Equidistant	Equidistant	581	546	863
Manizales	534*	837	863	962	302
Pereira	555*	858	884	983	281
Armenia	607*	910	1082	1051	225
Cúcuta	Equidistant	Equidistant	676	673	1056

Resource: Puerto Antioquia, 2017

Internationally the cost of moving a ton per kilometer is 1 cent, while in Colombia it is 6 cents. By decreasing distances, the total cost to export or import a product would be lower (Legiscomex, 2013).

The port of Urabá has always had a great advantage over other nearby ports (Barranquilla, Buenaventura and Cartagena) as it has a strategic location, however, it has several aspects to improve such as:

- It does not have a dock for loading and unloading, but it is at the beginning of the project carried out by Pio SAS and Terminal Link, which is in charge of the construction of the multipurpose port, i.e. it can handle containers, vehicles, grilles and cargo general.
- The connection routes to the port of Urabá are not in the best condition, for this is the process of building the roads of prosperity which shorten the transit times to the port and the quality of the journey will rise to a significant level.

As these aspects improve, this port will become the most important in Colombia, not only will be responsible mainly for the export of bananas and bananas, but will have greater opportunity to expand economically.

### 1.6.2 Banana Exportation

In 2015, in Colombia, banana exports totaled USD 802,627,671 and in 2014 USD 835,546,254, down 3.9% compared to the previous year, it should be noted that by the beginning of 2016, there was an increase in banana exports of 1.9% (Analdex, 2016)

**Table 1. Banana Exportations in Colombia 2014 – 2015**

PRINCIPALES PAISES	VALOR USD FOB 2014	VALOR USD FOB 2015	VR %	PART % 2015	KG NETOS 2014	KG NETOS 2015	VR %	PART % 2015
BELGICA	194.463.547	223.801.481	15,1	27,9	416.233.964	476.381.891	14,5	28,30
ESTADOS UNIDOS	221.875.718	161.971.169	-27,0	20,2	505.483.792	342.484.988	-32,2	20,30
REINO UNIDO	190.817.823	154.283.068	-19,1	19,2	388.780.127	309.313.887	-20,4	18,40
ITALIA	102.899.749	118.897.413	15,5	14,8	226.169.937	250.857.523	10,9	14,90
ALEMANIA	75.166.650	75.709.958	0,7	9,4	159.785.102	165.746.570	3,7	9,80
PAISES BAJOS	26.596.849	39.127.655	47,1	4,9	57.200.923	81.215.138	42,0	4,80
TURQUIA	5.653.753	6.998.581	23,8	0,9	12.451.069	16.778.028	34,8	1,00
PORTUGAL	948.980	4.958.916	422,6	0,6	2.350.129	10.378.032	341,6	0,60
ESPAÑA	3.760.509	3.658.779	-5,1	0,4	7.725.523	7.481.885	-3,2	0,40
DINAMARCA	3.158.039	2.880.724	-8,8	0,4	6.650.724	5.705.823	-14,2	0,30
<b>SUBTOTAL</b>	<b>825.341.618</b>	<b>792.197.744</b>	<b>-4,0</b>	<b>98,7</b>	<b>1.782.831.291</b>	<b>1.666.343.765</b>	<b>-6,5</b>	<b>98,90</b>
<b>TOTAL GENERAL</b>	<b>835.546.254</b>	<b>802.627.671</b>	<b>-3,9</b>	<b>100</b>	<b>1.799.666.328</b>	<b>1.684.148.126</b>	<b>-6,4</b>	<b>100,00</b>

Resource: Analdex, 2016

The table above shows that the main country to export this product is Belgium, with USD 223,801,481, followed by the United States with USD 161,971,481, in countries such as the United States, United Kingdom and Spain shows a drop in exports from 2014 to 2015.

Banana exports worldwide reach a total of 16.5 million tons. The main exporting countries are Latin American, headed by Ecuador, Costa Rica, Guatemala and Colombia (occupying fourth place with a total of 1.88 million tons) (Puerto Antioquia, 2015)

Colombian banana production is 1.88 million tons per year, located in Urabá, and Magdalena, and is mainly destined for exports. By 2015 Urabá made banana exports of 76% of the country's production, generating annual revenues of USD 576 million. The main banana exporting companies since the Port of Urabá, are UNIBAN, BANACOL, BANAFRUT AND TROPICAL, directing 95% of exports to the European Union and the United States.

### **1.6.3 Urabá Port**

This port has a strategic location, which allows access to markets in the Pacific, the Caribbean, the United States, the European Union and Central America. It has a close proximity to the Panama Canal and the Colon Free Zone. With these conditions this port has greater advantages compared to the main ports of Colombia, such as Buenaventura, Barranquilla and Cartagena, as it can find significant savings in time and costs due to its proximity to the main cities.

Since the beginning of the investments made by Pio SAS, the port of Urabá, Now Puerto Antioquia will find the capacity to receive approximately 500,000 TEU containers per year and to store bulk of 120,000 tons.

With these changes to be made Puerto Antioquia will be more attractive for exporting and importing companies in Colombia, since in addition to its privileged location, costs will be significantly reduced.

After an arduous investigation, the main logistical obstacles that influenced the banana export process from the port of Urabá, culture, infrastructure and location, costs, infrastructure and technology were found, each one being detailed below.

### **1.6.4 Culture**

According to the DANE; The inhabitants of Urabá are 10% of the population of Antioquia and then of the valley of Aburra, is the subregion of Antioquia with greater population growth since 1985, with a percentage change of 117% that can be reflected of the immigration that receives given Its economic potential with banana, livestock and to some extent by the development of the agro-industrial sector.

This is the region that currently has the highest rate of inter-departmental growth of the department: 2.6% and by the year 2020 is projected that its population is around 750 thousand inhabitants.

In Urabá is a population of 557,963 inhabitants, which shows that the quality of life is low, bearing in mind that they have a considerable overpopulation.

One of the greatest difficulties in consolidating Urabá's development is the situation of violence and displacement. Conflicts generated by the confluence of actors in the territory lead to permanent and significant population displacement within the region, from rural areas to major urban centers, from other regions to the central area and from other centers and subregions, which have determined complex socio-cultural and economic situations (Gobernación de Antioquia, 2012)

According to the DANE 2013, the Urabeña population is articulated by a higher percentage of young people than old, also because of the conflict and displacement that this area had, have been limited some variables that have directly affected the society as the economy and the education. But the picture is changing; since with the projects that are being advanced in this department people will have more possibilities of access to education and a decent quality of life. At present there are 5 headquarters of the University of Antioquia, 2 headquarters of the Seine, a headquarters of the polytechnic, the free zone, the Pan American clinic which is considered high technology, Apartado hospital among others. In addition, according to the Governor of Antioquia Sergio Fajardo projects are being carried out that also have coverage in this area, such as Antioquia, the most educated, with which the Urabeña population has the possibility of access to middle and higher education.

On the other hand according to Andrés Felipe Bustos manager of Puerto Antioquia, with the construction of the port will activate 1500 jobs in the construction period and 800 to 1000 jobs in the operation process. It is to clarify that the labor activities of the port will be executed by Urabeña population. Undoubtedly, this is a project with social responsibility, which will involve both the private and public sector as well as individuals in this department, which will be highly benefited by the projects in this department.

In order to develop operations from the port of Urabá, it is necessary to relocate professional personnel, especially from Medellín, since it has so far been difficult to find professionals in logistics or accounting processes that can be counted on to carry out this activity. Currently, educational projects have been initiated with SENA and the University of Antioquia, in order to prepare a human resource that can be counted on to carry out positions that are basically

focused on port, hospital and financial operations. This will guarantee access to all the resources required to develop all the port, logistics and operational activities in the companies dedicated to the export of bananas from the port of Urabá.

Also the obstacles that are presented with the merchandise to be exported by the Colombian authorities must be mentioned, since for the subject of drug trafficking and possible contamination of the merchandise. Before boarding, they are usually arbitrary, discriminatory or injurious to the merchandise at the time of inspection.

### **1.6.5. Infraestructura y ubicación**

Considering that the port of Urabá, found on the Atlantic Ocean, has a strategic location in relation to the main markets of the country, and has valuable access to the construction of the Prosperity Highway, these advantages should be To become one of the most competitive ports in Colombia, however, has certain shortcomings which do not help you compete for this place.

With the proximity of the port of Urabá to Medellin (350 kilometers), and knowing that this is destined mainly for the export and management of the banana industry, this port has not been used as expected, making changes to the Infrastructure and logistics processes to port Antioquia, would bring many benefits for the region of Antioquia, as they would have a multipurpose port (bulk and general cargo, containers and vehicles) and this would bring significant development advances.



According to the analysis made by (Legiscomex, 2016) states: The port of Urabá thanks to its privileged geographical location. It would allow the department of Antioquia to position itself competitively and efficiently in terms of logistics costs by concentrating 7.5% of the total value of the national industry and 8.1% of manufacturing employment. Its location will enable global markets to access and boost industrial and commercial production in the face of the impending Free Trade Agreement; shortening distances between the different ports, which would reduce the costs of the export and import processes.

The geographical location of Puerto Antioquia is very privileged, which can help you to become one of the most competitive ports in the world in Comparison with other ports, allowing connection to markets such as Europe, North America, and being a connection with Asian markets.

The approximate driving time from Medellín to Urabá is approximately 9 hours and 50 minutes, if the National Government starts to create connection routes between these two cities with projects such as the Autopista de la Montaña and Autopista de las Américas, It could shorten the time to 4 hours and 30 minutes, this advance can create greater competitiveness of the port of Urabá with the main ports of Colombia, as to today the costs and routes so arduous generate little attention to this port.

It can be said that this port has the best location compared to other Colombian ports, but lacks advanced machinery and logistics infrastructure which may show mismanagement of the merchandise and poor storage of this.

As mentioned above, so that this port can be maintained in front of the others, not only does it need an improvement in the port structure, it must invest in the ways and accesses that allow its competitive level to increase compared to other countries.

Colombia is privileged for its biodiversity and for having both seas at the national borders, if you take advantage of these advantages correctly, you can opt for economic growth, starting from the development with which you account the seaports, the port of Urabá has a Preferred location, but if they do not have a port infrastructure and the right equipment, it will not be able to move forward and not take advantage of all the resources it has at its disposal.

When looking at the Colombian variable rating, the lowest two were infrastructure, with a rating of 2.44 (98 in the world) and tracking and tracing, with a score of 2.55 and the 111th position worldwide. (Writing Economics and Business, 2014)

Some of the obstacles at logistic level is the draft of the port, since this is natural and does not allow an optimal operation. Vessels with a gross weight of more than 8,000 tons can not enter properly, because of this the ships must remain on the high seas waiting to be loaded by the tugs, thus adding more steps to the cargo movement process. This is summarized in a longer time for the logistic operation and a higher cost in the required personnel.

Cargo that is mobilized: The port of Urabá is suitable for the movement of bananas and other fruits, it does not have the means to move large volumes of cargo, as it lacks cranes to do so, it does not have enough warehouses or storage warehouses, all this results in delays for those using the port services. (Arbelaez, 2014)

### **1.6.6. Costs**

As already mentioned, the port of Urabá is a great alternative for the economic development of Antioquia, since it has a privileged location, but the costs with which it must face to carry out the process of exit of the merchandise to the main Ports of the country, are very high, this taking into account tolls, per diem to drivers and fuel.

A company that wants to transport goods from Medellin to Buenaventura, must have an expense of 8 tolls, with an average of \$ 284,000, from 14 to 16 hours of transit and 499 kilometers. Similarly, to transport goods to Cartagena, there must be 11 tolls which cost approximately \$ 290,000 with 16 to 18 hours of transit and 633 kilometers. Also would be for Barranquilla, an average of \$ 242,000 for 10 tolls, with a delay of 16 to 18 hours, and 679 kilometers. These costs do not count the value of gasoline and per diem.

If we observe the above mentioned costs, it can be perceived that an exporter who carries out the process by one of the main ports of Colombia is found with high expenses, which could be diminished if the exports were made from the port of Urabá, Account that it is a shorter distance and could reduce costs by up to 50%, all this when the port of Urabá has the port capacity to increase its activities.

Likewise, if we compare the ports mentioned above, an exporting company prefers to carry out its export processes from ports such as Barranquilla, Cartagena or Buenaventura, so that these will bring higher costs than to make it through the port of Urabá, this because its merchandise Is going to be safer and with a better qualified process, then if we look at these variables, the port

Urabá has less road transportation costs between Colombia, but with high costs in the export process, which makes it less competitive front To the other ports of Colombia.

As can be seen in the following table, the costs of the road from Medellín to the port of Urabá are significantly lower against the main ports of Colombia, however, these costs are not so relevant if we consider the infrastructure of the port of Antioquia And the roads to this. With this table we find that it is much more favorable to export by the port of Urabá as long as the projects for which they are in function are fulfilled, in the port of Urabá, otherwise, this port will remain at a lower level In comparison with the other Colombian ports.

**Table 2. Costs Ground Transportation**

Ruta	Flete Terrestre por Tonelada según SICETAC. Pago a conductor	Tarifa prom empresa intermediacion 10% aplicado por las empresas del transporte en Antioquia para cobro al generador	Flete prom por Ton empresa de transporte en Antioquia para el pago al conductor	Tarifa promedio empresa con intermediacion del 10% aplicado por las empresas de transporte en Antioquia para cobro al generador	Peaje	Valor por Peaje	Kms	Tiempo (horas)	Combustible (Galones)	Valor por galon
Medellin / Buenaventura	\$ 81.854	\$ 91.000	\$ 60.000	\$ 66.000	Primavera	\$ 24.200	499	14	75	\$ 585.225
					Supia	\$ 24.200				
					Tarapaca 2	\$ 49.700				
					Santagueda	\$ 39.300				
					Betania	\$ 35.900				
					Uribe	\$ 35.900				
					Loboguerrero	\$ 28.300				
					Cerritos 2	\$ 44.900				
					<b>Total peajes</b>	<b>\$ 282.400</b>				
Medellin / Cartagena por San Juan de Nepomuceno	\$ 95.704	\$ 105.274	\$ 65.000	\$ 71.500	Niquia	\$ 3.100	643	18	96	749088
					El Trapiche	\$ 33.000				
					El Pandequeso	\$ 22.000				
					Los Llanos	\$ 21.800				
					Taraza	\$ 21.800				
					La Apartada	\$ 21.500				
					Carimagua	\$ 44.260				
					Las Flores	\$ 11.800				
					El Carmen	\$ 22.500				
					Gambote	\$ 23.300				
					Turbaco	\$ 14.800				
<b>Total peajes</b>	<b>\$ 239.860</b>									

Project Execution

<b>Medellin / Cartagena por San Juan Onofre</b>	\$ 95.704	\$ 105.274	\$ 65.000	\$ 71.500	Niquia	\$ 2.800	593	16	99	\$ 772.497
					El Trapiche	\$ 33.000				
					El Pandequeso	\$ 22.000				
					Llanos	\$ 21.800				
					Taraza	\$ 21.800				
					La Apartada	\$ 21.500				
					Carimagua	\$ 44.260				
					La Esperanza	\$ 21.900				
					San Onofre	\$ 21.600				
					Gambote	\$ 24.100				
					Turbaco	\$ 14.800				
					<b>Total peajes</b>	<b>\$ 249.560</b>				
<b>Medellin / Barranquilla</b>	\$ 100.535	\$ 110.588	\$ 70.000	\$ 77.000	Niquia	\$ 2.800	679	16	102	\$ 795.906
					Trapiche	\$ 33.000				
					Pandequeso	\$ 22.000				
					Los Llanos	\$ 21.800				
					La Apartada	\$ 21.500				
					Taraza	\$ 21.800				
					Carimagua	\$ 44.260				
					El Carmen	\$ 22.500				
					Flores	\$ 11.800				
					Sabanagrande	\$ 23.300				
					Calamar	\$ 21.500				
					<b>Total peajes</b>	<b>\$ 246.260</b>				
<b>Medellin / Turbo</b>	\$ 65.000	\$ 71.500	\$ 62.500	\$ 68.750	Ebejico	\$ 26.700	340	8	51	\$ 397.953
					<b>Total peajes</b>	<b>\$ 26.700</b>				

Fuente: El Impacto Para Las Empresas Antioqueñas De Los Costos Logísticos Para Exportar Por El Puerto De Urabá, 2016

**NOTAS**

Flete: Valor que la empresa transportadora paga al propietario o beneficiario del vehiculo

Tarifa: Valor que la empresa de transporte cobra al generador de la carga

\*Peajes Calculados para una TM 2Ejes, este varia según los ejes del vehiculo

Promedio de consumo de una Tracto camión es de 6,7 Kilómetros por Galón

Valor Galón ACP para el día 11/Mayo/2016 \$ 7.803

It must be taken into account that the cost of Medellín to Urabá is much lower because at the moment it only has a toll, since the roads do not have an advanced infrastructure, but at the moment in which the projects are finished These routes will increase; The cost charged by the transport companies is \$ 68,750, this is very high considering that it is a shorter route to others, and becomes even higher than the cost charged to Buenaventura (\$ 66,000), this is due to That transporters who ship goods to Urabá do not normally have cargoes of merchandise for return, they would have to return empty or move to other cities where they may find freight contracting. This is why the costs are so high, the carriers are blinded in case of no new contracts.

If the port of Urabá had a larger port capacity, and more port activities were carried out for both export and import, the costs of the transporters could be significantly lower as there would be more merchandise flow from this port.

#### **1.6.7. Infrastructure and technology in Puerto Antioquia.**

According to Andrés Felipe Bustos manager of Puerto Antioquia; Urabá currently has one million flat hectares, of which only about 100,000 to 150,000 hectares are being harvested. According to this information there is a high potential of agro industrial growth for this border, when it is said agro industrial; Is also intended to cover some of the traditional products currently marketed (bananas, pineapples and other fruits) Other

goods such as livestock, cocoa, wood, among others that are expected to be exported from this port.

The port operation in Urabá has large and small barges, which have a capacity to carry between 12 and 14 containers. The largest have a 360 ton capacity, 36 meters long, 9 meters wide, 1.7 meters draft; the smallest have capacities of 160 tons, 31 meters long, 7 meters wide and 1.2 meters draft.

On the other hand, the loading equipment used along the river, use different operating systems, from modern bridges - cranes, with capacities between 10 and 30 tons suitable to move containers, to endless rail systems (Pulleys), used for Palletized loads. (Arbelaez, 2014)

According to the port company of Turbo Pisisi S.A, Puerto Antioquia will be constituted by 3 phases, seeking to create a more efficient service in terms of handling dry containers, refrigerated containers, general cargo and vehicles.

Construction of Phase I will take place in the middle of 2017; and will begin operations in the middle of 2019. Serving Panamax container ships, Reefers vessels, general cargo ships, ro-ro ships.



**Figure 2. Phase I**



Resource: [Sociedad Portuaria de Turbo Pisisi S.A](#)

In this first phase a marginal dock of 490 m length will be constructed, a access channel of 7.0 KM, with depth of 13 Meters, patios to store up to 8,000 dry containers, patios to store up to 1290 refrigerated containers, patios of general cargo, Courtyards of vehicles, warehouses, workshops among other facilities.

**Figure 3. Phase II**



Resource: [Sociedad Portuaria de Turbo Pisisi S.A](#)

The second phase is planned to be built in 2024, the marginal pier will be extended, 170 additional Meters, reaching a total length of 660 Meters, will also expand the access channel and will deepen 17 Meters. In order to serve container ships up to 14,000 TEUS, onshore will expand the patios of dry containers, in order to store 18,900 containers of 20 '. Accumulating a built area of 34 Hectares.

**Figure 4. Phase III**



Fuente: Sociedad Portuaria de Turbo Pisisi S.A

In the third phase, a 250-meter-long quay, located in the Casanova canal and the expansion of the patios for both dry and refrigerated containers, is expected to be completed in the medium term, taking into account the market and the operation of the port. At the end of the three phases the port will have approximately 45 hectares, will be able to mobilize up to 1,630,000 TEUS per year, including 180,000 TEUS of refrigerated containers, to achieve this, six super-portico panamax gantry cranes will be adapted; Capable of reaching up to 23 containers, two panamax gantry cranes; Capable of reaching up to 15 containers, a mobile crane 25 RTG, 62 trucks for the

internal transfer of containers, 2 non-intrusive scanners. The port will be operated by highly trained personnel. In addition, the terminal will be controlled by advanced TOS system.

At this moment the port of Urabá has a low and obsolete technology, which is necessary to renew immediately so as to improve the efficiency of the processes and the safety of these, with this machinery used, as the barges, are very prone to Have losses since they do not have the safe equipment that is necessary for the manipulation of the merchandise to be exported in containers.

Puerto Antioquia has a lot of capacity to exploit its advantages, as the available space they have, but this is not used as it should be to build a secure structure.

### **1.6.8 Projects in Puerto Antioquia - violence**

At the moment in Urabá is the great project of Puerto Antioquia, which brings many benefits for this city and for the exporters who use the port of Urabá, there are great expectations with this project is in transit, but they do not stop resonating Issues such as the violence with which they coexist daily in this area and the overpopulation with which they count.

Apartadó is in constant progress, from the construction of clinics, universities and shopping centers, not only banana is produced as it was some time ago, there is also the production of pineapple, avocado, palm and cacao, new companies are installed which Help the city's infrastructure with new buildings, all these advances seek a higher socio-economic level that helps to position this city as a constant development.

The violence with which they live in this region cannot be left aside, it shows how it progresses significantly in many aspects, but this is not one of them, Apartadó continues to have a very high level of violence, that is It must add drug trafficking and empowerment of zones by paramilitaries makes any project, however advanced and complete, it may not be as striking as it should be. Obviously they are in constant development, but these factors do not allow to advance as expected in the region.

The Antioquia port project has high expectations for the region. It is a megaproject of infrastructure that requires US \$ 500 million in investment and which includes a viaduct of four kilometers, three of them offshore, through which the dock is loaded and unloaded; The goal is to move five million tons a year through these logistical facilities: this would be the third such work in the country, following the developments of Puerto Nuevo, Prodeco in Magdalena, and Puerto Brisa in La Guajira, Which extended conveyor belts to load well into the sea. However, in the case of Antioquia port, the offshore extension is greater and it is a viaduct that must support the cargo transported in tractomulas that will take it to the pier, whose piles sink to 80 meters in the seabed; it is an unprecedented work in the country. (Puerto Antioquia, 2017).

When the Puerto Antioquia project is finished, it would not only increase the economy of the region, this zone could become the new port region of the country, would find significant progress that will help the export process, with the conditions that the Port of Urabá counts at the moment a boat process can take up to two days to be realized, when this project is finished, this time

can diminish up to two hours. With these changes the costs would decrease significantly and would be beneficial for the export of any product.

The banana exporters in Colombia come mainly from Apartado, they have the production at hand, that is, they have a great advantage that is to have the agro process in the same region where the export is made, for this project has the option to The large bananas of Urabá that are part, thus can find infinite advantages with the construction of this port, the logistic processes at these moments are too expensive, with this project those costs can diminish 30% or 40%.

The problem of violence in this region is still alive, new gangs are created every day, which want to take over the area, when new projects are created in Apartadó, it requires staff from other cities like Medellín, since they do not have Professionals, but it is not easy to achieve these transfers since people do not find it attractive to live in an unsafe area and with violence like this.

It is clear that in this region significant changes are being made to increase the development of this, but significant changes must be made which will help improve the security of the area, changes such as promoting study, and decent work, as well as young people Have different alternatives for their futures, with this violence can decrease significantly and projects like Puerto Antioquia have the opportunity to succeed in the future.

## Findings

In order to have accurate and accurate information, an interview was made with Mr. Santiago Zapata Uran, in charge of the export process of CI Tropical SAS, whose purpose is to produce and export bananas from the port of Urabá, bearing in mind that they work directly With the subject of this investigation, we take as reference the comments. Based on the interview recorded in the annexes of this work we find the following:

The port of Urabá has two piers, called Zungo and Nueva Colonia, located in Carepa and Turbo, respectively, these two have the two port operators that are Banacol and Uniban, considering that there are only these two operators, the activities of the Exporting companies from the port of Urabá is very limited, since all the processes of ship and transfer have to be through these.

For the company CI Tropical, one of the biggest limitations that they have when making the exports from the port of Urabá is the infrastructure of the wharf, since it must carry out an extensive process with the merchandise to be able to take it to the ship that goes to Make the transport, do not have a spring which facilitates this process since the sea does not have the necessary depth, is done by means of barges. All this process can only be done with the operators Banacol and Uniban, this makes the costs are higher, since they do not have options like in the ports of Cartagena, Barranquilla or Buenaventura.

Taking into account that the process with banana is so complex, because it must be done each step with exact times or the merchandise can be damaged and not received abroad, so if you take

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into account the process so arduous To process the merchandise to the ship, companies should have a port and a full wharf which will facilitate the process and do it faster.

The exporting companies that use the port of Urabá must contract all the processes with different companies, from the shipping line to the ship, creating higher costs, due to the obligation they have to contract only between two port operators by obligation.

The company CI Tropical exports approximately 30 containers, taking into account the other exporting companies, the port of Urabá has the need to expand and increase the level of service in capacity and costs.

One of the initiatives that has the port of Urabá in process is the project of Puerto Antioquia, for this process are betting many of the exporting companies of this port, as it will bring significant advantages for these and will thus have the great advantage of Have a service at the level of the main ports of Colombia with the proximity they have at the moment, becoming the best option for the user companies at the moment and many future companies since this port has a privileged location close to the main cities from Colombia.

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**Figure 5. Pier Nueva Colonia Turbo**



Resource: CI Tropical SAS

One of the biggest advantages that the banana exporters have in the port of Urabá is that the production of this product is directly in this area, and thus the costs of transportation from other cities to the piers are reserved, since they are routes So short and in the same region, the costs are very low, but all this is no longer an advantage when they take into account the costs of loading and movement of the cargo inside the pier, these are very high since they do not We have the technology and the necessary infrastructure to carry out a safe and fast process.

The area in which the port of Urabá is located is very likely to have contact with the paramilitaries, the FARC, and armed groups because it has such a strategic location, lends itself to these groups trying to send illegal merchandise through exporters Of banana, thus contaminating the cargo.

For this reason, the banana exporting companies that use this port must be constantly on the lookout for this aspect and in frequent contact with the anti-narcotics police, in order to make sure that their merchandise goes as expected, this generates higher costs and they are prone to many risks which can generate fines and expenses without having them present.



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**Figura 6. Transport of bongos to the ship, Turbo**



Resource: CI Tropical SAS

## **Conclusions and Recommendations**

### **1.7 Conclusions**

Currently one of the main barriers to banana exports is the cost of freight, we are one of the countries with higher gas costs, which increases the cost of domestic transportation. However, with the project of the roads of prosperity, a reduction in route from the centers of distribution to the port is expected, which can reduce the freight cost by 50%.

Another barrier for the export of the product is the road infrastructure, since it is not in very good condition, some unpaved and narrow road sections are reported, it is expected to overcome this barrier with the project that advances the National Government of roads of prosperity or 4G, with which it is expected to have access to roads in good condition thus minimizing this barrier.

Puerto Antioquia currently does not have its own dock, which is a problem for loading and unloading of the merchandise, this part of the logistic process, is highly affected in time and cost since the loading and unloading must be done by means of barges, which delays the export process.

But according to the investigation, this problem will end with the Puerto Antioquia project, which is expected to reform the facilities so they have the capacity to operate as do the main ports of Colombia.

The intermediaries Uniban and Banacol, also are a barrier for the banana companies, since to export from this port these two companies must be in the middle. Currently there is no intention of eliminating these intermediaries, but these make the operation more expensive.

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Finally, as a general conclusion, we identified that the barriers in the banana export process are found in: internal freight costs, road infrastructure, port infrastructure and technology used in the port of Urabá.

## **1.8 Recommendations**

After doing research on logistical obstacles for banana companies from the port of Urabá, some of the recommendations we can make are:

For companies interested in exporting bananas from the port of Urabá it is recommended to establish their production in this area, since in this way the internal freight costs will not be so high and in addition to that the fruit can be exported without being fulfilled for so long after its production. It is also important to keep in mind that this territory has many hectares available and the perfect climate for banana production.

For those interested in investing in the area, it is a territory with a very positive projection, for the projects that are ahead and the development plans for this locality.

The companies must take advantage of the competitive opportunities that will be generated after the completion of works with the remodeling of Puerto Antioquia and the ways of 4G prosperity as a reduction in internal freight costs of approximately 50% is expected and the Opportunity to export with shorter times, since after the construction of the port will not have problems for loading and unloading of merchandise at the dock, which will save time and cost.

Finally, this research can be used as a means of information regarding the export of bananas from the port of Urabá; for companies, students or interested parties.

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## **Annexes**

### **Annex 1: Interview CI TROPICAL SAS - Santiago Zapata Uran International Trade Assistant**

#### **1. What products does CI Tropical SAS export from the port of Uraba?**

We produce tropical fruits for export, but we emphasize bananas from the Cavendish group.

#### **2. How long has the company Ci Tropical SAS carried out the commercialization process through the port of Urabá?**

Banana farms have been in operation for about 40 years, but the establishment of the companies and the creation of the marketer, in view of the export potential of the Urabá region, started operating in 2002.

#### **3. Apart from the banana export that other activities does the company?**

The main corporate purpose of the company will be to carry out foreign trade operations and particularly to direct its activities towards the promotion and commercialization of Colombian products in foreign markets.

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The main business purpose of the company will be the exploitation and export of agricultural products, through its cultivation, purchase, sale, sowing, import of inputs and, for this purpose, it will be able to carry out all commercial acts, of bussiness. You will also be able to acquire necessary real estate and furniture and participate in partnerships or associations made with this object.

**4. What are the main countries to which they export bananas from the port of Urabá?**

The main destinations for exports are the USA and almost all the countries of the EUROPEAN UNION, the cargo reaches the main ports on the Mediterranean Sea (South Europe) and the Atlantic (North Europe).

**5. Which farms do banana growers have?**

CI TROPICAL has 24 farms, in the sector there are companies that have from 10 farms to more than 100 and in total Urabá has more than 35 thousand hectares cultivated throughout the area of the banana axis in the municipalities of Chigorodó, Carepa, Turbo and Apartado.

**6. The process of banana cultivation must be very accurate and measured in the times, do you believe that the port of Urabá has the capacity for this process?**

The port facilities, in this case the piers, despite their limitations in infrastructure compared to terminals such as Cartagena, Buenaventura and others, Urabá has an organization and a great knowledge of the logistics process to transport fruit especially bananas, are Very careful with the chain of cold, with the manipulation of the fruit, these piers harbor an impressive capacity to move cargo, at the moment the banana sector is one of the fastest growing yet with the facilities that counts.



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**7. Given that the banana farms are located in Urabá, do the costs of transportation, storage and loading help to reduce expenses or increase?**

The costs of transporting the farms to the wharves are minimal, but we must bear in mind that the costs of vessels, handling and storage in the port are higher because not having the necessary resources the processes are more arduous and complicated.

**8. How does the Urabá port infrastructure influence the banana export process?**

Although it is not such a large infrastructure, compared to other Colombian ports, Urabá has a trajectory of more than 50 years in the banana sector, therefore they are experts and have been able to couple to the infrastructure they count, they are very efficient. In the logistics process of exporting bananas, it is clear that the construction of the port would greatly enhance this and many other sectors. Influence negatively on costs, first of all because freight rates are increasing since it is only two companies that provide the service of fluvial and maritime transport to the ship, second that everything for the subject of infrastructure must be carefully programmed and be very careful. With the times and costs derived from the operations, such as loading and filling containers, cutting of fruit, refrigeration, sealing, counternarcotics inspections, etc.

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**9. By means of which port operators carry out the export process in the port of Urabá and how is this process?**

The port of Urabá has only two port operators, Banacol and Uniban, we work with both, through agreements that allow us to have a safe process. With Uniban we only contract the transport, but with Banacol it is a more complete service since it includes everything related to the handling and transport of merchandise in the port. Also this implies higher costs which cannot be avoided since we only have these two options to export through this port.

**10. Approximately how much capacity does each pier have in the port of Urabá?**

**Capacity of the piers:**

**Container Terminal:**

**In the sector of Zungo:** 15 thousand square meters perfectly suitable for the storage and movement of containers.

Electrical substation of 1.000 kva.

8 Power Packs with powers between 200 and 500 kva.

1 nitrogen generating plant of 400 cfm @ 120 psi.

Workshop for maintenance of refrigerated containers, meeting the standards of the Institute of International Container Lessors (IICL).

Security and surveillance supported by cameras.

At present we are working on the adaptation of an additional 8,000 square meters, which will increase our operating capacity.

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**In the sector of New Cologne:** 5 thousand square meters perfectly suitable for the storage and movement of containers.

Electrical substation of 800 kva.

4 Power Packs with powers between 200 and 500 kva.

1 nitrogen generating plant of 400 cfm @ 120 psi.

Workshop for maintenance of dry containers, meeting the standards of the Institute of International Container Lessors (IICL).

Security and surveillance supported by cameras.

At present we are working on the adequacy of an additional 4,000 square meters, which will increase our operating capacity.

Loading docks for palletized or loose cargo:

NEW COLONY: Two wharfs with cargo capacity of 250 t / h each.

ZUNGO: A wharf with load capacity of 300 t / h.

**11. How do you think the project that has Antioquia port can improve the processes and costs of CI Tropical?**

Many of the companies that use this jetty are betting on this project, as it will bring many advantages to the exporters from the costs to the safety of our merchandise. The project is in process but we know that at the moment it finishes they will improve the processes notoriously.

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**12. How is the pollution control process of the cargo from this port?**

The port of Urabá because of its strategic location and the area in which it is located is very likely to have contact with armed or paramilitary groups. In order for CI Tropical SAS to be assured that sending a pollution-free merchandise, every time a cargo dispatch is carried out, direct contact is made with the narcotics police so that they have control in these aspects.

**13. Do you think that the technology that the port of Urabá has is compatible with the type of merchandise they carry?**

The rent of the containers is made by means of shipping companies which have the correct container for our cargo, which would be refrigerator containers that come with the appropriate temperature for the conservation of the fruit, but in the pier as such there is no Port suitable for the handling of the containers or with the appropriate cranes, the cargo is carried to the ships by means of barges. With this process we have more risk with our merchandise.