

## RIVER AND PORT

### Magdalena River Navigability Project

Magdalena River Navigability Project			
Thematic Focus	River - Port	Entity/Area	Cormagdalena
Sector	Bocas de Ceniza in Barranquilla - Barrancabermeja - Puerto Salgar	Location	Magdalena River
Budget	COP 216.301.840.985	Investment	COP 216.301.840.985
Contributory Partner	The financing comes from the National General Budget, channeled through transfers from the Ministry of Transportation to Cormagdalena.		
Project Name	Navigability of the Magdalena River between Bocas de Ceniza in Barranquilla - Barrancabermeja - Puerto Salgar.		
Project Description	<p>The public works project, led by the Transportation Sector and Cormagdalena, aims to turn the Magdalena River into the central axis of multimodal transportation in Colombia. It seeks to empower the river as part of a strategic logistics corridor that integrates physical and functional aspects, including transportation infrastructure and commercial practices. This will address logistical and commercial challenges, increasing the country's competitiveness by connecting inland industrial and productive areas with the ports of Barranquilla and Cartagena.</p> <p>The project covers 929 km of the Magdalena River, from Bocas de Ceniza to Puerto Salgar in Cundinamarca. It includes dredging, equipment acquisition, and construction of works to improve navigability, with a monitoring plan. A feasibility study will be carried out to recover navigability between Barrancabermeja and Puerto Salgar, with challenges involving public and private actors to activate cargo transportation in this area of the Magdalena River.</p>		
Investment Opportunity	<p>The investment project addresses the improvement of the Magdalena River through four main milestones:</p> <ol style="list-style-type: none"> <li>1. It includes the dredging of the access channel to the Port of Barranquilla, the Barrancabermeja-Puerto Salgar section and the Mompox arm, with specific investments detailed. For the access channel to the Port of Barranquilla, investments of COP \$43,162,611,320 in 2024 and COP \$110,460,847,665 in 2025 are foreseen, with a section already awarded until July 2026 through future vigencias futuras.</li> <li>2. The acquisition of dredging equipment, such as a cutter and suction dredge, is budgeted at COP \$26,322,800,000 for 2024. Although the budget has not yet been allocated, the Ministry of Transportation is managing the acquisition of a dredge for the access channel to the Port of Barranquilla.</li> </ol>		

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	<ol style="list-style-type: none"> <li>3. A channeling project is being carried out to improve the stability and navigability of the canal, with an initial investment of COP \$10,397,229,426 for the design of the works from Barrancabermeja to Barranquilla, including the access channel to the Port. It is expected that once the designs are completed, the resources for construction will be approved, with an estimated five years for completion.</li> <li>4. For the monitoring of the conditions of the Magdalena River and its impact on the navigable channel, an investment of COP \$4,622,600,000 is allocated. This includes the purchase of hydraulic and topographic measurement equipment, UAV equipment, a research vessel, as well as specialized software and hardware equipment.</li> </ol>
<p>Market Analysis</p>	<p>The bid for the dredging plan in the access channel to the Port of Barranquilla is mainly directed to foreign companies with equipment needed for these operations, mostly from the Netherlands. Some of the companies featured include Boskalis, Van Oord, Jan de Nul, Dredging International, Shanghai Dredging, Rohde Nielsen and Dutch Dredging. Dredging equipment comes from companies with extensive experience in this field, such as Royal IHC Dredging, Ellicott Dredges and Damen Shipyards Gorinchem.</p> <p>Studies and final designs for channeling can be carried out by academic institutions such as the National University of Colombia UNAL, Universidad del Norte, Universidad del Magdalena, or others with experience in the behavior of the Magdalena River. Also, companies specializing in river issues, including foreign companies with experience in similar projects, can carry out these studies and data analysis.</p> <p>The equipment and systems of the monitoring plan, with the exception of the research boat, are mostly supplied by foreign companies with vast experience in the technological development of equipment and software for measurements, analysis and monitoring in marine and fluvial environments.</p>
<p>Financial Projections</p>	<p>The cost of dredging in the access channel to the Port of Barranquilla is calculated based on the price per cubic meter, currently around \$7 dollars with a TRM of \$4,000 COP. This cost includes taxes, mobilization and demobilization, plus an additional dollar per cubic meter for practical pilots. It is estimated that approximately 3.2 million cubic meters will need to be dredged by 2025.</p> <p>Financial analyses indicate that the investment in dredging equipment will pay for itself in 3 to 4 years, with a state savings of 60% after considering operation and maintenance. The construction of channelization works ensures channel stability and self-dredging, significantly reducing the need for dredging. The monitoring plan will provide crucial information to intervene the canal in an efficient and sustainable manner, generating additional financial savings.</p>
<p>Sustainability and ESG considerations</p>	<p>The Magdalena River project involves an increase in river transport, especially advantageous for long-lasting, high-volume, low unit-cost cargo. It is expected to benefit producers and traders of vegetable oils, biofuels, fertilizers, empty containers, and minerals.</p>



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The advantages of river transport include:

1. **Energy efficiency:** 4 to 5 times greater than land transport and 1.5 times greater than rail.
2. **Safety:** Includes road and labor safety, as well as prevention of environmental accidents.
3. **Congestion and traffic:** The reduction of cargo on the roads alleviates congestion; one river convoy is equivalent to 240 tractor-trailers.
4. **Air pollution and noise:** Pollution and noise levels are significantly lower compared to other modes of transport.
5. **Land use and social impacts:** Passes through more open areas, avoiding landscape fragmentation caused by road construction.
6. **Minimal environmental effects:** Controllable with proper management plans, with less impact on issues such as spills and water pollution compared to other activities outside water bodies.

Risk Assesment and Mitigation

Identified Project Risks:

1. **Predial:** Not applicable at this stage of the project until construction of channeling works begins.(Private - Low).
2. **Environmental:** None of the project scope requires an environmental license.
  - Effects of delays and costs in obtaining environmental permits and procedures before authorities: Private - Low.
  - Effects of variations in the estimated value of socio-environmental compensation: Shared - Medium Low.
3. **Social:** No prior consultation processes are foreseen at this stage of the project.
  - Effects of encroachment on project infrastructure (Private - Low).
  - Unfavorable effects of compensation to riparian communities for environmental impacts.(Private - Medium Low).
4. **Networks:**
  - Variations in costs and deadlines derived from the management for relocation and/or intervention of networks. (Private - Low)
  - Variations in the estimated value for relocation and/or intervention of networks.(Private - Low)
5. **Construction:**
  - Variation in input prices and associated costs (Private - Medium Low).
  - Variations in work quantities and deadlines (Shared - Medium Low).
  - Variation in cost of works execution with respect to the budget (Private - Medium Low).
  - Effects related to the condition and equipment of existing infrastructure (Private -



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	<p>Medium Low).</p> <ul style="list-style-type: none"> <li>• Effects derived from geotechnical soil conditions (Private - Medium Low).</li> </ul> <p><b>6. Dredging:</b></p> <ul style="list-style-type: none"> <li>• Variation in dredging quantities. (Shared - High)</li> <li>• Variations in prices of dredging activities (Private - Medium Low).</li> <li>• Effect</li> </ul> <p><b>7. Financial:</b></p> <ul style="list-style-type: none"> <li>• Unfavorable effects of not obtaining financing (Private - High).</li> <li>• Insufficient resources for payment of audit and contractual support (Public - Low).</li> </ul> <p><b>8. Exchange rate:</b></p> <ul style="list-style-type: none"> <li>• Variation of the peso against other currencies (Private - Medium Low).</li> <li>• Variations in the value of the peso against the dollar and purchasing power (Private - Medium Low).</li> </ul> <p><b>9. Regulatory:</b></p> <ul style="list-style-type: none"> <li>• Changes in tax regulations subsequent to the opening of the bidding process (Shared - Very Low).</li> <li>• Changes in technical specifications derived from regulatory changes (Public - Medium High).</li> </ul> <p><b>10. Force Majeure:</b></p> <ul style="list-style-type: none"> <li>• Emerging damage due to non-insurable exonerating events of responsibility. (Public - High)</li> </ul>
Project Team and Experience	The Corporación Autónoma Regional del Río Grande de la Magdalena has highly qualified personnel with more than 15 and 20 years of experience in dredging, dredge purchase and structuring of river infrastructure projects.
Additional Information	At this stage of the project, no environmental license or land management is required.