

# International Assistance Request

ref: 2289

## Consolidation and Protection of the Walls of the Albarrada of the Historical Sector of Santa Cruz

### Summary

**State Party:** Colombia

**Properties:** Historic Centre of Santa Cruz de Mompox

**Type of Assistance:** Cultural / Emergency

**World Bank:** LMIC

**Reference:** 2289

### Process Steps

- ✓ Submitted on Jan 6, 2011
- ✓ Approval by Chairperson on Apr 5, 2011

### 1. State Party

Colombia

### 2. Title of project

Consolidation and Protection of the Walls of the Albarrada of the Historical Sector of Santa Cruz

### 3. Type of assistance

	Emergency assistance	Preparatory assistance	Conservation and management
<b>Culture</b>	✓		
<b>Nature</b>			
<b>Mixed</b>			

### 4. Project location

#### a) Will the project be implemented at a World Heritage property?

- Yes  
 No

- Historic Centre of Santa Cruz de Mompox

#### b) Will the project include a field component?

- Yes  
 No

c) If the project is being implemented at a World Heritage property, indicate whether it will also benefit other World Heritage properties, and if so, which ones and how?

### 5. Timeframe for the implementation of the project

Start date: January 15, 2011

End date: July 15, 2012

Duration: 18 months

## 6. The project is:

- Local
- National
- Subregional
- Regional
- International

## 7. Justification of the project

### a) Explain why this project is needed.

N/A

### b) List all supporting documents submitted, if applicable.

## 8. For emergency assistance only

### a) Describe the actual or potential threat/danger affecting the property

The proximity of the Historical Centre of Mompox to the river makes it particularly prone to floods caused by torrential rains. Since mid-2010, due to La Niña phenomena, rains have increased more than the historical average, especially in the Andean region and on the Caribbean coast of the country, largely affecting cities such as Mompox, both in its rural and urban parts and especially all the parts of the Historical Centre facing the Rio Magdalena.

The latest weather forecasts from the Centro de Predicción Climática – NCEP/NWS in August indicated that La Niña will intensify and will be affecting the country until the first trimester of 2011. This means that the two rainy seasons of 2010 (March - April - May and September - October -November) will be combined with the first rainy period of 2011, causing a significant rise in the levels of the rivers. This would increase the risk of slow flooding, quakes in the high slopes areas, and an enhancement of the risks of earthquakes and hurricanes in the Atlantic.

The departments that have been most affected by the winter season are: Bolívar, Magdalena, Sucre, Córdoba and Cesar. The following chart shows the damages reported in each department according to the numbers from the National System for the Prevention and Attention to Disasters (SIGPAD). (See Figure 1 of Annex 1)

As of today the most affected regions are: the Mojana, the Depresión Momposina and the Magdalena Department in its entirety. The Historical Centre of Santa Cruz de Mompox is in the Bolivar Department in the region known as Depresión Momposina. This region includes the three lowest branches of the San Jorge, Cauca and Cesar Rivers and its confluence with the Magdalena River, in the Córdoba, Sucre, Bolívar, Magdalena and Cesar Departments. According to the regional authorities, the Regional Commission for the Attention and Prevention of Disasters (Comité Regional para la Atención y Prevención de Desastres –CREPAD-), damages to both the Historical Centers and the rural areas were reported in the following cities: Mompox, Pinillos, Margarita, El Peñón, Talaigua Nuevo and San Zenón.

The floods are affecting the contentive walls separating the largest part of the Historical Centre from the river and all the public spaces around the Historical Centre, as well as the constructions bordering the river (See Figure 2 of Annex 1).

### b) Indicate how it might affect the property's Outstanding Universal Value

One of the most important areas of the Historical Centre of Mompox is the branch of the Magdalena River, along which the city was born and has developed. The river is the basis of the city's establishment in a unique natural environment, which gave rise to its creation and its later separation from development, allowing an extraordinary level of conservation. Approximately 70% of the Municipality area corresponds to water bodies of different nature, such as swamps, and water jets that are fueled by the Magdalena River, therefore their conditions depend on the river's behavior.

The high taxes as a result of humidity, as well as the characteristics of the biodiversity of

the Mompox Island and of the Depresión Momposina, allow Mompox to have flourishing vegetation contrasting with the buildings, the streets and the squares of the city. This contributes to making the high temperatures that characterize the city more bearable (they can reach 40.7°C). Along the coast of the Magdalena River in the Mompox area there is a large amount of trees of considerable dimension, generating a peculiar landscape and a specific micro-climate. These special conditions can disappear or be damaged because of the several erosive processes on the river banks and its shore each time winter comes.

At present, there is a high risk of flooding on the riverside of the Magdalena River in Mompox. The Albarrada (a stone wall used as city walls or contentive walls) was used to protect the Historical Centre against the river, as the only means of defense against yearly flooding, and it now reports serious damages. The state of conservation of the wall is critical as it presents water infiltrations (through cracks in the wall and stiff floors) mainly caused by detachments in the coating, which are mostly made in argamaza (mix of sand, water and lime). Also, there are possible problems in the differential settlements on a structural level in many parts of it.

These pathologies could be mitigated taking the right actions in the shortest time delay. The action plan to recover the structural conditions of the walls and its protection function include:

- 1) Structural consolidation
- 2) Elimination of the existing water infiltration
- 3) Protective interventions for its improvement and maintenance

### **c) Explain how the proposed project will address the threat/danger**

The project aims to recover the walls known as the Albarrada, the only system of defense against the floods which the Historical Centre of the City of Santa Cruz de Mompox has. If the walls are not functioning adequately to mitigate the impacts of the rising river, the risk of structural damages to the buildings of the Historical Centre increases dangerously. The constructions of the Historical Centre are part of the cultural value of the city, however the flooding will cause damages also to the foundations of the buildings, the public transports and to the settlements, reducing the structural capacity of the load-bearing walls and generating humidity problems in all of the buildings.

## **9. Objectives of the project**

### **GENERAL OBJECTIVE:**

Consolidate and protect the Albarrada of the Historical Centre of the city of Mompox, as a way to protect the city against flooding.

### **SPECIFIC OBJECTIVES:**

Complete the technical studies needed for the realization of the consolidating works for the Albarrada, specifically:

- STRUCTURAL DRAWINGS : studies and structural drawings, structural drainage, retaining walls and complementary works
- GEOTECHNICAL STUDY: geotechnical analysis of the grounds and soils in order to prepare action plans for restoration, reconstruction, consolidation, retaining and complementary works.
- HYDROMORPHOLOGIC ANALYSIS AND LANDSCAPE DESIGN :
  - a. Drawings and recommendations on the basis of the hydrological and geomorphologic characteristics of the area
  - b. Drawing of vegetation, referring to the concept of urban ecosystem, establishing simultaneously its living conditions and flexibility of uses, while guaranteeing its integration, connectivity and complementarily with the surrounding sites and the rest of the municipality
  - c. Bioclimatic studies

Realize the intervention works: restoration, reconstruction, consolidation, defense and complementary works to control flooding.

## 10. Expected results

Clearly state the **results** expected from the project and define the **indicators** and **means of verification** which can be used to assess the achievements of these results

Expected results	Indicators	Means of verification
Technical studies	(1) Structural drawings (2) Geotechnical study (3) Hydromorphologic analysis	Studies done and revised by a specialized team
Intervention works	(1) Construction of dams in M1 (2) Consolidation of the existing walls in M2 (3) Restoration of the existing wall in M2 (4) Structural reinforcement of the walls in M1 (5) Construction of drainage systems and rainy water management systems in M2	Final report and inventory Report of the visit to the historical centre of Mompox

N/A

## 11. Work plan

Activities	Time Frame (in month)											
	Year 1											
Months	1	2	3	4	5	6	7	8	9	10	11	12
Please see annex 5 attached Elaboration of Structural drawings	✓	✓	✓	✓	✓	✓						
Elaboration of Geotechnical study	✓	✓	✓	✓	✓	✓						
Elaboration of Hydromorphologic analysis	✓	✓	✓	✓	✓	✓						
Intervention works - These go from month 4 to 18				✓	✓	✓	✓	✓	✓	✓	✓	✓

## 12. Evaluation and reporting

A report corresponding to the execution of the studies and works will be sent by the Municipality of Mompox via the Ministry of Culture.

## 13. Profiles of specialists, trainers, technicians and/or skilled labour, if the project foresees the participation of such people

CVs of specialists have been attached

## 14. Key target audiences, including profiles of trainees / participants, if the project foresees the participation of such people

Structural Engineers, Hydraulics and Electrical Engineers, Budget Advisors

## 15. Budget breakdown

Items	Items Description	Amount x Unit USD	Total USD	Amount Requested to the World Heritage Fund USD	States party Funds USD	Other USD
<b>Organisation</b>						
Venue		19x75 Day	1,450	<b>1,450</b>	0	0
Office Expense		1,160x1 Unit	1,160	<b>1,160</b>	0	0
Secretarial Assistance		30x75 Day	2,219	<b>2,219</b>	0	0
Translation		5x75 Day	348	<b>348</b>	0	0
Audio Visual Equipment		22x75 Day	1,653	<b>1,653</b>	0	0
Total			6,829	<b>6,829</b>	0	0

Items	Items Description	Amount x Unit USD	Total USD	Amount Requested to the World Heritage Fund USD	States party Funds USD	Other USD
<b>Personnel / Consultancy service (fees)</b>						
National Expert	USD 2334.50 per week	2,335x12 Week	28,014	<b>28,014</b>	0	0
Coordinator	USD 435 per week	435x12 Week	5,220	<b>5,220</b>	0	0
Other	USD 863.96	864x12 Week	10,368	<b>10,368</b>	0	0
Total			43,602	<b>43,602</b>	0	0
<b>Travel</b>						
Domestic travel cost		4,072x1 Unit	4,072	<b>4,072</b>	0	0
Total			4,072	<b>4,072</b>	0	0
<b>Daily Subsistence allowance</b>						
Accommodation		407x5 Unit	2,036	<b>2,036</b>	0	0
Accommodation		407x5 Unit	2,036	<b>2,036</b>	0	0
Total			4,072	<b>4,072</b>	0	0
<b>Equipment</b>						
Sub Soil Exploration		114x104 Unit	11,822	<b>11,822</b>	0	0
Laboratory Trials		32x104 Unit	3,311	<b>3,311</b>	0	0
Total			15,133	<b>15,133</b>	0	0
<b>Evaluations</b>						
		0x1 Unit	0	<b>0</b>	0	0
Total			0	<b>0</b>	0	0
<b>Miscellaneous</b>						
Other		1,293x1 Unit	1,293	<b>1,293</b>	0	0
Total			1,293	<b>1,293</b>	0	0
<b>Total</b>			<b>75,000</b>	<b>75,000</b>	0	0

N/A

**b) Specify whether or not resources from the State Party or other sources are already available or when they are likely to become available.**

In 2011 the Ministry of Culture will invest 2.000.000.000.000, 00 Colombian pesos in intervention works on the public spaces of the urban axes of the Albarrada in Mompox.

#### **16. In kind contributions from the state party and other agencies**

##### **a) National agency(ies)**

Support and technical supervision of a specialized professional from the Heritage Commission of the Ministry of Culture

##### **b) Other bi/multi lateral organizations, donors, etc**

We are currently requesting from the Cultural Emergency Fund from the Netherlands. A technical application was sent on the 10th November 2010. We will have an answer in the week of the 20/24 December 2010

#### **17. Agency(ies) responsible for the implementation of the project**

Municipality of Mompox with the technical support of the Ministry of Culture

## **18. Signature on behalf of state party**

**Full name:** XXXX

**Title:** Ministry of Culture

## **19. Annexes**

### **Documents**

- ANNEX 1
- Annex 2 Mompox Photographs
- Annex 3 Project Breakdown
- Annex 4 International Assistance Application Spanish and English
- Annex 5 Project Activities
- Budget.xlsx
- CV Expert 1
- CV Expert 2
- CV Expert 3
- CV Expert 4
- CV Expert 5
- FICHA TECNICA OPUS DIC 10.xls
- REGISTRO FOTOGRAFICO A DICIEMBRE DE 2010
- Signed request-16 December 2010