

## Reports on the Public Consultation process of the UNDP/GCF Project “Mi Costa”

### Table of Contents

#### Summary

#### PHASE I

##### A. Reports on Consultations held during the Funding Proposal formulation.

1. Visit by the National Project Team to intervention areas in Playa Cajío, La Coloma and Surgidero de Batabanó from October 11<sup>th</sup>. to 13<sup>th</sup>, 2017.
2. Visit by the National Project Team to intervention areas in Júcaro, Santa Cruz del Sur, Manzanillo, Gibara and Baracoa from October 22<sup>th</sup>. to 28<sup>th</sup>, 2017.
3. Meeting with the National Green Climate Fund Project Team on November 14<sup>th</sup>, 2017.

#### PHASE II

4. Visit by the National Project Team to intervention areas in La Coloma and Playa Cajío on July 19<sup>th</sup>. to 20<sup>th</sup>, 2018.
5. Visit by the National Project Team to intervention areas in Júcaro from August 1<sup>st</sup>. to 3<sup>rd</sup>, 2018.
6. Evidences of the Validation workshop held from October 22<sup>th</sup>. to 26<sup>th</sup>, 2018.

##### B. Report on the implementation of Public Consultation tools in local communities.

7. Results of the implementation of Public Consultation tools in Santa Cruz del Sur from September 16<sup>th</sup>. to 18<sup>th</sup>, 2018.
8. Results of the implementation of Public Consultation tools in La Coloma on September 21<sup>th</sup>, 2018.

#### List of Annexes

Annex 1: Tool used for Consultations at local community level.

Annex 2: Worksheets developed by local actors during the Public Consultation process (implementation of the participatory mapping tool).

Annex 3: Pictures of visits to intervention sites by and meetings of the Project team, stakeholders, actors and community leaders.

## Summary

A wide national and local consultation process<sup>1</sup> was carried out during the Funding Proposal formulation, involving around 500 actors.<sup>2</sup>

Institutional actors namely in farming, forestry, food (fisheries), water resource management, urban planning, education, public health, science, technology and conservation management, civil defense, finance and prices, economy and planning, construction, tourism, environmental management, civil society organizations, regulatory and enforcement authorities (Forest Rangers Corps), among others, were consulted at both levels.

Government bodies' officials were consulted at provincial and municipal levels (i.e. the Provincial and Municipal People's Power Assemblies and Provincial and Municipal Administration Councils).

The meetings held in the communities located in project intervention areas were also attended by Presidents of the People's Councils, who also act as Delegates of the Municipal People's Power Assemblies.

The consultation process was divided into the two following phases:

Phase I: Inception consultation to socialize and share information with the following purposes:

- Share the Project proposal and explain its relevance to the national policy framework.
- Learn about the Climate Adaptation Strategies implemented in or planned for the territory.
- Identify and engage potential local actors including their capacities to contribute to Project activities.
- Identify existing local capacities and needs for training and monitoring systems.
- Confirm the current health status of ecosystems and verify the damages caused by climate change impacts.
- Confirm existing opportunities for the implementation of Ecosystem Based Adaptation (EBA) measures and potential actions at local level.

Phase II: Confirmation consultation with the territories, with the following purposes:

- Confirm the interventions/activities foreseen for each of the Project intervention areas, taking into consideration social and environmental safeguard criteria, including gender.
- Confirm the commitment of the actors involved as well as for co-financing.
- Define Baseline indicators and potential mid-term and final targets.
- Develop a cost-benefit analysis of the interventions.

---

<sup>1</sup> For the purposes of this Report, the term "Consultation" means the work undertaken by technical teams and during meetings and visits at national level with local actors in targeted territories; while the term "Public Consultation" refers to the implementation of the "Interview" and "Participatory Mapping" tools in selected communities.

<sup>2</sup> The list included herein comprises meetings held by small work teams to accurately identify the data of the participants. However, other groups of actors were consulted through bilateral meetings and during visits to Project intervention areas.

- Define equipment and technology requirements for the interventions to be carried out by the actors involved in each of the intervention areas.
- Update intervention actions maps at the local level.
- Validate the estimated number of recipients and interrelationship with key actors.
- Apply the Public Consultation<sup>3</sup> tool in selected communities.

---

<sup>3</sup> The design and implementation process of Public Consultation tools was led by the Cuba Program of the Latin American School of Social Sciences (FLACSO) of the University of Havana (UH), under the Ministry of Higher Education (MES). It included Interview and Participatory Mapping tools.

## PHASE I

### A. Reports on Consultations held during the Funding Proposal formulation

#### 1. Visit by the National Project Team to intervention areas in Playa Cajío, La Coloma and Surgidero de Batabanó from October 11<sup>th</sup> to 13<sup>th</sup>, 2017.

**Date: October 11<sup>th</sup>. Playa Cajío, Artemisa/Güira de Melena**

##### Purposes of the visit

- Submit the Project to local authorities from intervention provinces and municipalities.
- *In situ* visit to vulnerable areas and exchange meeting with community leaders, leaders of organizations and population in settlements.
- Meet with authorities to discuss visit results and measures to identify intervention actions.

##### About the visit

The visit began in Playa Cajío with Marta Fleitas Arguelles, CITMA Director from the province of Artemisa, and other executives appointed by the provincial government (See Annex 1 attached: List of participants).

A presentation of the visit's objective and a brief Project explanation were made.

##### Opinions expressed by settlers

Juan M. Díaz, worker of: He mentions that floods caused by seawater intrusion constitute the main problem in Playa Cajío. He points to the most affected places.

He expresses that most people feel highly depressed because they know this place will disappear by 2050 as a result of climate change. He points to the former area where people used to go to spend an enjoyable time though now has vanished due to mud excess and because the last 2012 cyclone swept away everything that was built there. He explains how the built pier altered the coastal bottom sedimentation and now no one can bathe there (the Bar zone).

Miguel Márquez, President of Playa Cajío People's Council: He explains that seawater intrusions take place, to some extent, due to failure to maintain drainage channels unblocked. He says that, in the community, the Bar is the most vulnerable zone because the seawater bursts through houses. He also agrees that the pier has affected the seabed and the solution should be either its demolition or relocation to another place, if it is still of interest for some economic actors. He states that sewage disposal close to houses is something significantly affecting the population. However, he states that in Majahuevo, one kilometer far from the Bar zone, there was a bathing site that was even visited by people from Artemisa, Güira and other places. They used to be very happy there because they could sit under the trees and buy light food, beer, soft drinks, etc. But nobody visits the area any longer due to muddiness. Besides, the existing facilities were destroyed by the 2012 hurricane. In fact, it used to be the most important zone of the settlement.

The Project Team and the authorities believe this is a site demanding some adaptation actions. Therefore, the recommendation is to further elaborate on this approximate 100-meter site.

Pablo Abraham, Head of the Community Council: He agrees with previous colleagues and only wishes to point out that the people is willing to improve the settlement's conditions, even though they know that the Urban Planning Institute is planning to relocate it. That has disillusioned people.

Marta Fleitas, CITMA Director: She states that the provincial development strategy is well completed and Playa Cajío is considered a priority area due to its high vulnerability. However, she agrees that many things can be done to cope with climate change. Some are already in place, namely, a baseline with a lot of information collected by the UNDP/FA Manglar Vivo project. The coastal area problems are already identified. Many studies and practical experiences from Cuban institutions have shown that there are still conditions which could allow the recovery of mangroves and other coastal ecosystems capable of providing Ecosystem Based Adaptation (EBA) effective actions. This should be clearly stated in the Project. Behavioral measures have been mainly focused on the inland relocation of people living in the community who have been affected by productive and infrastructural damages due to floods and storms associated with climate change. However, this is not everybody's feelings. Better to say, the common trend is not to abandon the space they have created for as long as they can remember.

#### Problems encountered by the population

- Significant obstruction of the surface water flow due to the South Dike construction.
- Coastal erosion, floods and seawater intrusion into aquifers.
- Agriculture in this area -one of the most productive in the country- depending on these aquifers for irrigation purposes. Likewise, these waters are also supplied to the capital.
- Progressive deterioration of water quality.
- Limited community climate change awareness.

Following the visit to Playa Cajío, we held a meeting with municipal executives at the Municipal Administration Council (See Annex 1a attached: List of Participants).

A Project presentation and detailed explanation were made and an exchange meeting was held between the visitors and the locals.

#### Agreements

1. The municipal authority will create a team made up by stakeholders and entities and persons who, in one way or another, are associated with the Project.  
Date: October 16-20. Responsible: Provincial/Municipal CITMA.
2. The local team should draft proposals for intervention actions in each of the 11 target interventions and will submit them to the National Project Team. The National Team will evaluate such actions and communicate, to the Local Team, the ones demanding climate change impact adaptation measures. The Local Team should provide the detailed technical and financial information to estimate and work out the Project budget for the selected measures.  
Compliance date: November 15. Responsible: Municipal CITMA.

The visit concluded at the venue of the Artemisa government. Comrade Sergio, first deputy chief of the Provincial Administration Council, and the rest of participants, were given an explanation on the purposes of the visit and the Project, as well as a summary of the provincial working meetings. Comrade Sergio offered his support to future actions.

Time of visit conclusion: 6.30pm

**Date: October 12<sup>th</sup> Pinar del Río/La Coloma**

#### About the visit

Idalia López Pedroso, Head of the Environmental Unit, and other executives appointed by the provincial government welcomed the National Project Team at the CITMA Delegation in Pinar del Río.

The first meeting was held at the provincial government with the participation of stakeholders involved in the Project. The meeting was presided over by the first vice-president of the provincial government (See Annex 1b attached: List of participants).

The in-depth Project was submitted. All doubts were clarified. In the meeting, emphasis was made on the fact that cadres are also included in the training and the need to consider this Project as an opportunity to identify and implement adaptation measures in the coastal area.

The National Team insisted on the following aspects:

- Inclusion of the Project agreed actions in municipal development plans.
- The Project belongs to all. Everybody must be involved, including the community.
- Main climate change-related vulnerability will be intervened in this stretch.
- The Project is a challenge to Social Sciences.

#### Visit to La Coloma settlement

This settlement has more than five thousand inhabitants.

The meeting was held in one of the community schools. The meeting was attended by the President of the People's Council and three delegates to the Municipal People's Power Assembly, the teacher of the community school, representatives from CITMA Territorial Delegation and executives from the Municipal Administration Council.

#### Main vulnerabilities

In general, it was agreed that the sewage system is deteriorated. Likewise, there is coral-reef deterioration and a decrease in fisheries. Consequently, production and employment have been reduced. The significance of La Coloma Combinado Pesquero (fishing enterprise) was pointed out as well as the affected artisanal fishing.

Most people live without any motivation because, eventually, they will have to abandon their houses and their space due to climate change. There is a population's perception on environmental problems and very specific adaptation options based on the local conditions.

The bathing site, known as the beach by many, is a true muddy site due to sedimentation and, aside from its intensive anthropic activity, is completely devoid of sand and has been transformed because of the swell erosion effects caused by Hurricanes Ike and Gustav in 2008.

#### Visit to the bathing site

Participants: Project Team, President of the People's Council, Delegates to the Municipal People's Power Assembly, Teacher, CITMA specialist and executives from the Municipal Administration Council.

#### Main vulnerabilities and potential actions

- The community does not have an adequate perception of the coastal ecosystem value – namely, the mangrove and the swamp- for adaptation, economic and recreational purposes.
- The coastal mangrove forest is deteriorated due to indiscriminate logging for cooking purposes.
- The potential restoration of the bathing site through soft engineering and awareness-raising work.

The visit ended at 6.30pm.

#### Agreements

1. The Municipal Administration Council will create a team made up by stakeholders and entities and persons who, in one way or another, are associated with the Project.  
Date: October 16-20. Responsible: Provincial/Municipal CITMA.
2. The local team should draft proposals for intervention actions in each of the 11 target interventions and will submit them to the National Project Team. The National Team will evaluate such actions and communicate to the Local Team the ones demanding climate change impact adaptation measures. The local team should provide the detailed technical and financial information to estimate and work out the Project budget for the selected measures.  
Compliance date: November 15. Responsible: Local CITMA.

**Date: October 13<sup>th</sup>. Mayabeque/Surgidero de Batabanó**

#### About the visit

San José de las Lajas, Mayabeque: meeting with provincial authorities. Presentation of the Project (See Annex 1c attached: List of Participants).

#### Visit to Surgidero de Batabanó settlement

Surgidero de Batabanó has 5,734 inhabitants. The hygiene-sanitary situation is fragile: water effluents penetrate into the houses when channels are flooded.

#### Problems encountered by the population

- If sanitation is in place, there will be no floods, overflowed channels or water intrusion into the houses.
- Wastes are dumped into the sea.
- Fishing accounted for 4,500 tons before, now it does not reach 2,000 tons.
- Until recently, crab catch was non-existent. However, its capture is being recovered.
- A fishing project began in Batabanó, but it was abandoned.
- Shrimp vanished due to men's actions and dumping.
- The community wishes to recover the "small beach", a recreational center which used to attract a lot of people from other places, but was lost as a result of seabed sediments and waist-deep mud. The recreational center, which offered good meals before, is closed. Inflow of visitors has decreased.

#### Agreements

1. The municipal authority will create a team made up by stakeholders and entities and persons who, in one way or another, are associated with the Project.

Date: October 16-20. Responsible: Provincial/Municipal CITMA.

2. The local team should draft proposals for intervention actions in each of the 11 target interventions and will submit them to the National Project Team. The National Team will evaluate such actions and communicate to the Local Team the ones demanding climate change impact adaptation measures. The Local Team should provide the detailed technical and financial information to estimate and work out the Project budget for the selected measures.

Compliance date: November 15. Responsible: CITMA.

The visit to the community ended at 6:45pm.

**Rapporteur: Isabel Torna Falco.**

**List of participants:**

No.	Full name	Entity
1.	Jorge L. Barrios Mier	Municipal Government
2.	Osmany Alayo Oliver	Municipal Government
3.	Alexis Miranda Tamayo	Municipal Government
4.	Bárbara González Rosario	Municipal Government
5.	Yamilé Hinojosa Sánchez	Municipal Government
6.	Ileana Jorñol Fernández	Municipal Government
7.	Adonis Roldó	Municipal Government
8.	Alain Duque Pérez	Provincial Agriculture Division
9.	Alexis Argudín Pereira	Provincial Division of Science, Technology and Environment
10	Marta Fleitas Arguelles	Provincial Division of Science, Technology and Environment
11	Madelaine Domínguez García	Provincial Division of Science, Technology and Environment
12	Sergio Rodríguez	Provincial Government
13	Belquis Rojas	Provincial Government
14	Nora Santalla García	CITMA Territorial Delegation
15	Madelyn Rivero Romero	CITMA Territorial Delegation
16	César C. García Urrutia	CITMA Territorial Delegation
17	Manuel Ramírez Blanco	Credit and Trade Bank
18	María T.Valdés Echevarría	Municipal Hygiene and Epidemiology Unit
19	Maypú Martínez Sánchez	La Coloma Industrial Fishing Enterprise
20	Eduardo Espinosa Pantoja	Provincial Soil Division
21	Yasmani Hernández González	Provincial Soil Division
22	Idalia López Pedroso	CITMA Territorial Delegation
23	Felipe Madrazo Escalona	CITMA Territorial Delegation
24	Yodaily Montané Guerra	Municipal Urban Planning Division



25	Lázaro Ordaz Hernández	Provincial Urban Planning Division
26	Mario L. Mateos Lorenzo	Provincial Meteorological Center
27	Odalís Pereda Baez	CITMA municipal specialist
28	Mayra López Expósito	Municipal Housing Division
29	Lázaro Jesús Delgado	President of the People's Council (Delegate to the Municipal People's Power Assembly)
30	Bárbara Mitjans Rivera	Vice-President of the People's Council (Delegate to the Municipal People's Power Assembly)
31	Mariuska Rodríguez Martínez	Delegate to the Municipal People's Power Assembly
32	Guillermo Deus León	Delegate to the Municipal People's Power Assembly
33	Vivian Leal Cabrera	Delegate to the Municipal People's Power Assembly
34	Rosa Olivera Carmona	Municipal Education Division
35	Terina García	Territorial Delegation of Science, Technology and Environment
36	Mirtha Alfonso	Territorial Delegation of Agriculture
37	Julio Morejón Clemente	Provincial Enterprise for Wildlife Preservation
38	Julia Benítez Mesa	Federation of Cuban Women
39	Rubén Hernández	Provincial Civil Defense Staff
40	José Castro	Territorial Delegation of Science, Technology and Environment
41	Elenne Quiñones	Territorial Delegation of Science, Technology and Environment
42	Vladimir Collado	Territorial Delegation of Science, Technology and Environment
43	Julio Rodríguez Camacho	Sport Fishing Federation
44	Lidia Fernández Salas	Territorial Delegation of Agriculture
45	Kenia Reyes Núñez	Provincial Urban Planning Division
46	Yanitzá García	Territorial Delegation of Science, Technology and Environment
47	Miguel Rubalcaba	Municipal Government
48	Mercedes Arellano	Environmental Agency / Specialist
49	Isabel Torna, AMA	Environmental Agency / Specialist
50	Roberto Pérez	Technology and Knowledge Management Enterprise / Researcher
51	Dayma Echeverría	FLACSO / Researcher

## 2. Visit by the National Project Team to intervention areas in Júcaro, Santa Cruz del Sur, Manzanillo, Gibara and Baracoa from October 22th. to October 28th., 2017.

**Date: October 23<sup>th</sup>. Júcaro (Ciego de Ávila province) settlement**

### Purposes of the visit

- Submit the Project to local authorities in intervention provinces and municipalities.
- ***In situ*** visit to vulnerable areas and exchange meeting with community leaders, leaders of organizations and population in settlements.
- Exchange meeting with CITMA and the National Institute of Water Resources (INRH, its Spanish acronym) on the intervention proposal submitted by the province to the National Team for its potential incorporation as an activity to be implemented within the Project framework.
- Exchange meeting with authorities on the visit results and measures to identify intervention actions.

### About the visit

The first part of the visit took place in Ciego de Ávila on October 23. The meeting began at 9.00 a.m. with all organizations involved, namely, the Ministry of Foreign Trade, Civil Defense, Agriculture, Wildlife, National Institute of Water Resources, Fisheries and CITMA. The meeting was presided over by the Provincial Government Vice-President, Noemí Iglesias, and the CITMA Delegate. Likewise, the meeting was attended by the President of the Venezuela Municipal Administration Council where the Júcaro community is located.

Rudy explained the purpose of the visit. The vice-president provided information on the situation in Júcaro after Hurricane Irma. She reported that the government decided on the need to relocate 35 to 40 Palmarito and La Puya houses totally destroyed by the Hurricane. The first 2 buildings are under construction. She also pointed out the importance of this Project for the Tarea Vida implementation.

Roberto submitted and explained the Project objectives and its three main components and identified 11 intervention forms. He stressed the existing correlation between the Project concept and the 11 tasks of Tarea Vida.

In the afternoon, we visited the Júcaro community together with the President of the Municipal Government. During the visit, the First Secretary of the Municipal Communist Party of Cuba joined us.

In the case of this community, many houses and, of course, those vastly affected by the Hurricane, are located along the coastal zone. Therefore, the shoreline mangrove was devastated as a result of houses built there. Hence, the mangrove left is right behind them and, in some cases, less than 1 meter far from the houses. Besides, many mangrove stretches have been refilled thus causing the ecosystem fragmentation. This situation worsens with the opening of several drainage channels leading to the coastline and carrying an important volume of liquid and solid domestic wastes which creates very unhealthy hygienic-sanitary conditions.

The community is facing serious problems with water supply and quality, saltwater intrusion and very low fishing production, even though they have an industrial-fishing enterprise there.

Likewise, this settlement also lodges the Marina Marlin for life-on-board vessels visiting the Jardines de la Reina archipelago.

The main activities or interventions identified in this area include:

- Rehabilitation of coastal ecosystems in general, including the rehabilitation and sanitation of existing drainage channels and recovery of bathing areas for the people's recreation. Facilities in Cayos de Ana María Protected Area were also affected by the Hurricane.
- Control and reduction of saltwater intrusion resulting from the ground water table recharge. Out of the 56 drilled wells, 26 will be included in the Project. There are 19 barometric wells to monitor seawater intrusion.
- Fishing improvement and diversification.
- Strengthening and systematization of a Comprehensive Monitoring System.
- Drafting and implementation of a working strategy for and with the community for its preparedness and involvement in climate change adaptation activities.

**Date: October 24<sup>th</sup>. Santa Cruz del Sur (Camagüey province) community**

The working meeting was held at the CITMA Delegation with the participation of the Provincial Delegate and Government represented by an International Collaboration Specialist. Other institutions like CITMA, Urban Planning Institute and a large number of specialists from the Empresa de Uso y Aprovechamiento del Agua (Water Use and Management Enterprise) also attended the meeting.

The meeting structure was similar to the one held in the province of Ciego de Ávila.

In the afternoon, we visited the Santa Cruz del Sur community where we held a meeting with the municipal government headed by the municipal vice-president.

During the visit, the conditions found were, to some extent, similar to the ones observed in the Júcaro coastal area, though worsened by a wall built along the coastline. It is not a breakwater, but a wall built almost at sea level. Instead of protecting the coastal area, it is deteriorating the coastline, thus creating a greater flooding and swell risk for the population. Currently, the wall has collapsed in different stretches and remains in the water so it constitutes a higher threat for the coastal area.

Hence, the main activities or interventions to be implemented in Santa Cruz del Sur include:

- Rehabilitation of the coastline mangrove ecosystem.
- Removal of the existing wall along the coastline in order to reduce coastal erosion.
- Rehabilitation of the coastline mangrove ecosystem and lagoons around the Combinado Pesquero, due to circulation obstruction in these areas.
- Existence of a dumping site in the coastline itself -in the flooding area.

- Improvement of water supply and quality through water harvesting (rainwater harvesting in devices designed by CITA/INRH), well drilling for the ground water table recharge and salinity control. These initiatives were timely proposed during the invitation launched to draft the coastal erosion Pre-feasibility Study.
- Strengthening and systematization of a Comprehensive Monitoring System.
- Drafting and implementation of a working strategy for and with the community for its preparedness and involvement in climate change adaptation activities.

**Date: October 25<sup>th</sup>. Manzanillo (Granma province) settlement**

The visit began with a meeting convened by the Provincial Government. The meeting was presided over by the government vice-president and was attended by organizations directly associated with the Project.

The meeting structure was similar to the previous ones. Rudy explained the purpose of the visit and Roberto made the Project presentation. The vice-president stated that the Project was more important than what he expected and urged the President of the Municipal Government to convene all members of the Municipal Administration Council.

However, some participants pointed out the following issues:

- Playa Caletones should create a synergy with the National Research Project on Economic Evaluation of Ecosystem Services<sup>4</sup>.
- The required Meteorological radar to measure wind-force scale.
- Aside from the saltwater intrusion, this zone reveals a severe drought process.
- The PNUD/GEF ECOVALOR Project expects to financially support the updating of the Gibara territorial management, bearing in mind the economic assessment criteria of ecosystem services.
- The need to include a person in charge of the feasibility study in the team.

In the afternoon, we went to Manzanillo. There, we held a meeting with the Municipal Government members and visited some of the most affected places selected by them. Some presidents from the People's Councils accompanied us. Conditions demanding more attention include:

- Rehabilitation of a significant coastal ecosystem extension based on key elements such as the rehabilitation of the mangrove area and the 15 deplorable drainage channels system close to the coast carrying all kinds of wastes.
- Rehabilitation of the Cauto Basin.
- Analysis of conditions and use of fishing gears in fisheries.
- Rehabilitation and strengthening of Conservation Areas, especially in damping zones. For example, the Río Guao watershed, the single river which is not in a reservoir.
- Significant pollution levels from domestic liquid and solid wastes, as well as from industrial wastes like the accumulator factory, the footwear factory and the rice mills in San Felipe, the most vulnerable area of the territory; two coastal mangrove and lagoon areas with the

---

<sup>4</sup> Financed by the Cuban State, through the National Science and Technological Innovation Program.

direct dumping of rice husks demanding immediate attention since, aside from polluting the area, can be very important for animal feed purposes.

- Rehabilitation of the city breakwater.
- Strengthening and systematization of a Comprehensive Monitoring System.
- Drafting and implementation of a working strategy for and with the community for its preparedness and involvement in climate change adaptation activities. Some unhealthy neighborhoods still exist in the coastal area itself.
- Evaluation of the demonstrative experience proposal to install rainwater harvesters covering a 60m<sup>2</sup>/house area by means of buried 5,000 and 8,000-liter plastic tanks, the use of manual pumps and filters produced and approved by the competent authority to improve the collected water quality before its distribution.

**Date: October 26<sup>th</sup>. Gibara (Holguín province) settlement**

In this case, due to administrative reasons, we first visited the Gibara municipality. We began with a meeting with the government. This meeting was attended by 3 vice-presidents of the Municipal Administration Council, the CITMA delegate, the Environmental Unit and the CISAT, as well as several agencies involved in the Project.

The meeting structure was similar to the previous ones. The main issues demanding attention include:

- Rehabilitation of coastal ecosystems in every bay banks and, above all, in the city itself where we observed a escarpment several of several meters running from the coastline to the city entry road and the elimination of casuarinas there whose roots boost up the escarpment.
- Rehabilitation of beaches and bathing areas for the population which are less severe than those in the southern coast.
- Salinity control and improvement of water supply and quality.
- Consolidation of the meteorological station existing in the territory.
- Rehabilitation of the existing breakwater which was seriously damaged by Hurricane Irma.
- Strengthening and systematization of a Comprehensive Monitoring System.
- Work out and implement a working strategy for and with the community on preparedness and involvement in climate adaptation activities. Some unhealthy neighborhoods still exist in the coastal area itself.

An important strength in Gibara is the Information Management Center and the Genetic Studies Center in charge of producing varieties more resistant to problems currently faced in agriculture.

In our return to Holguín, we were briefly welcomed by Marcia Agüero Sánchez, vice-president of the Provincial Government. There, Rudy explained the Project scope and objectives, as well as the Gibara visit results. As was pointed out, Banes municipality had been the most affected by previous Hurricanes Ike and Sandy and by Hurricane Matthew.

**Date: October 27<sup>th</sup>. Baracoa (Guantánamo province) settlement**

In this case, we did not go to the Provincial Government for it was very far from Baracoa. In the initial meeting, we were welcomed by the Secretary of the Municipal Administration Council and the CITMA Specialist in Baracoa. The meeting was attended by 2 specialists from the Guantánamo CITMA

Delegation, one from the Environmental Unit and one from UPSA, as well as the main specialist from the PNAH Office settled in Baracoa. Likewise, other agencies attended the meeting.

The meeting was held in the same fashion. As a result of the visit, we realized that the main interventions should focus on the need to:

- Rehabilitate coastal ecosystems, especially mangroves and beaches.
- Improve water supply and quality.
- Include some national intervention areas to promote their recovery, since damages caused last year by Hurricane Matthew have not been solved yet.
- Strengthen and systematize a Comprehensive Monitoring System.
- Work out and implement a working strategy for and with the community on its preparedness and involvement in climate adaptation activities. Some unhealthy neighborhoods still exist in the coastal area itself.

At the end of the meeting, we met Nancy, President of the Provincial Government, who was in Baracoa accompanying a group of deputies and to whom we presented the Project and explained some significant details related to the Guantánamo province.

The President expressed her appreciation and stressed the support of the Guantánamo Government to the Project.

**Rapporteur:**

Isabel Torna Falco - AMA

Dalia Salabarría Fernández – CNAP

**List of Participants:**

No.	Full name	Entity
1.	Nereyda Junco Garzón	Centro de Investigaciones de Medio Ambiente de Camagüey (Camaguey Environmental Research Center)
2.	Tamara Morales Estrada	Provincial Urban Planning Division
3.	Isis Hernández Sosa	Centro de Investigaciones de Medio Ambiente de Camagüey (Camaguey Environmental Research Center)
4.	Roxana Soria Rodríguez	Provincial Administration Council
5.	Mabel Reyes	Provincial Administration Council
6.	Andrea Armas Rodríguez	CITMA Territorial Delegation
7.	Yaiti Mora Vázquez	CITMA Territorial Delegation
8.	Anairma Olivera Consuegra	INRH-Empresa Provincial de Acueducto y Alcantarillado (Provincial Water and Sewage Company)
9.	Amalia Rojas Rodríguez	Municipal Agriculture Delegation
10.	Lesvia Fernández Molina	Municipal Administration Council
11.	Dalia Mesa Pérez	Municipal Administration Council
12.	Laydi Veloso Correa	Municipal Administration Council
13.	Lorena Espinosa Montenegro	Municipal Urban Planning Division
14.	Alieski Molina Frías	Municipal Urban Planning Division
15.	Arnel Benítez Cedeño	Risk Reduction Management Center
16.	Nelson Luis Rodríguez Maceo	Provincial Administration Council
17.	Margot Hernández Fernández	CITMA Municipal Expert
18.	Rafael Benítez Guevara	Municipal Administration Council
19.	Osmani Castro	Flora and Fauna Provincial Enterprise
20.	Francisco Montero Milán	Provincial Civil Defense Staff
21.	Yandri Despaigne Videt	Municipal People's Power Assembly
22.	Rody Paredes Quiñones	Provincial Director of Finance and Prices
23.	Osvaldo A. Piñeiro	Provincial Directorate of Economy and Planning
24.	Alexei Silveira	Provincial Agriculture Delegation
25.	Ulpiano Fernández	Municipal Agriculture Delegation
26.	Georgina Zayas Alba	Municipal Administration Council
27.	Esther Salgueiro Alvarez	CITMA Territorial Delegation
28.	Enrique Remón Domínguez	Provincial Administration Council
29.	Juana Camacho Aguilera	Cuban Women Federation
30.	Yuniet Bruceto Leyva	Municipal Administration Council
31.	Alexander Ávila Boffil	Municipal Administration Council
32.	José Silva Meriño	Municipal Administration Council
33.	Evelyn Romero Rojas	Municipal Urban Planning Division
34.	Laura Lina Andrés Castellanos	CITMA Municipal Expert
35.	Ruberdanis Tamayo	CITMA Territorial Delegate
36.	Roxana Pérez	Municipal Education Division

37	Edelmis Mederos Vega	Municipal Division of Economy and Planning
38	Wilder Carmentate Reyes	Centro de Investigaciones y Servicios Ambientales y Tecnológicos (Environmental and Technological Research and Services Center)
39	Norelis Peña Peña	CITMA Territorial Delegation
40	Rolber Reyes Pupo	CITMA Territorial Delegation
41	Yuslania Lago Cervantes	Municipal Administration Council
42	Ricardo Suárez Bustamante	CITMA Municipal Expert
43	Carlos Carraceno Rodríguez	CITMA Provincial Delegation
44	Gilba Figueras Torres	CITMA Provincial Delegation
45	Gerardo Begué Quiala	Unidad Presupuestada de Servicios Ambientales (Environmental Services Budgeted Unit)
46	Geovanys Rodríguez Cobas	CITMA Territorial Delegation
47	Abigail Martínez Matos	Provincial Agriculture Delegation
48	Esteban Leyva	Municipal Agriculture Delegation
49	Molino Columbié Soto	Provincial Construction Enterprise
50	Rudy Montero Mata	Head of the Risk Management Group, Environmental Agency (AMA)
51	Dalia Salabarría Fernández	CNAP / Expert
52	Mercedes Arellano	AMA / Expert
53	Isabel Torna	AMA / Expert
54	Raidel Vidal González	Centro Integrado de Tecnologías del Agua (Integrated Water Technologies Center)
55	Martha Suárez Acuña	INRH-Empresa de Aprovechamiento Hidráulico (Water Use and Management Enterprise)
56	Irenis Abad Ramírez	INRH-Empresa de Aprovechamiento Hidráulico (Water Use and Management Enterprise)
57	Armando Rodríguez Cañete	INRH-Empresa de Aprovechamiento Hidráulico (Water Use and Management Enterprise)
58	Lisbet Font Vila	CITMA Territorial Delegation
59	Julio Montano Iglesias	INRH-Empresa de Aprovechamiento Hidráulico (Water Use and Management Enterprise)
60	Juan F. Cabana Molina	Water Resources Territorial Delegation
61	Mayra González Díaz	Centro de Investigaciones de Medio Ambiente de Camagüey (Camaguey Environmental Research Center)



### 3. Meeting with the National Green Climate Fund Project Team on November 14th., 2017.

Place: Environmental Agency

Topic: Feedback on the visits made to the territories<sup>5</sup> and conciliation of the visits report with the National Team.

#### 1. Playa Cajío

- Beaches on the south coast are generally muddy, however, the construction of walls and piers concentrates mud and people cannot bath in those waist-deep mud areas.
- The idea is to rebuild the bathing area but not for touristic purposes but with an ecosystem-based approach. The objective is to rebuild the ecosystem while enabling people to bath in that area and not vice versa.
- The Project does not finance the relocation of settlements, as this is forbidden by the Green Fund.
- The agreement reached during the visit is that FLACSO would organize the public consultation in the area during the second fortnight of November. This was proposed by the Municipal Administration Council of Güira de Melena, but the date is too soon. Isabel, from AMA, proposed that FLACSO visited the area again before the public consultation.
- In the province of Artemisa, authorities are very receptive.

#### 2. La Coloma

- The meeting in this territory was attended by a Vice-president of the government, so it was a high-level meeting.
- Fishing is an issue to be taken into consideration given its importance for the population. Since production and employment have decreased, illegal fishing has increased.
- An intense awareness campaign is required.
- A meeting with formal and informal community leaders will be arranged. FLACSO should participate.
- The agreement reached during the visit is that FLACSO would organize the public consultation in the area to be held during the second fortnight of November. Isabel, from AMA, proposed that FLACSO visited the area again before the public consultation.

#### 3. Surgidero de Batabanó

- Waste is discharged into the sea
- Houses are filled with black-or-grey water waste.
- A meeting with formal and informal community leaders will be arranged. FLACSO should participate.
- The agreement reached during the visit is that FLACSO would organize the public consultation in the area to be held during the second fortnight of November. Isabel, from AMA, proposed that FLACSO visited the area again before the public consultation.

#### 4. Júcaro

---

<sup>5</sup> The purpose of FLACSO joining this tour/visit was for the national experts to obtain the required information to adequately design the Public Consultation tool to be applied at the local community level.

- Drainage channels carry liquid and solid waste all the way up to the coast, creating unhealthy sanitary and hygiene conditions.
- The *Marina Marlin*, leading to *Jardines de la Reina* is nearby. Luxury life-on-board vessels are used, creating a great social problem given the strong contrast. The proceeds of the Marina are not invested in the village. The workers are not from the village. The causeway is half finished.

## 5. Santa Cruz del Sur

- Welcomed by CITMA.
- There is a wall along the coast resulting in a lot of damage.
- There is a dump in the coastline itself.
- Need to improve water quality and availability.
- A second 2 or 3 day visit to Santa Cruz was proposed. First there should be a meeting with the CITMA Provincial Delegation, where some resistance was found, and then a meeting at the municipal level. Somebody from FLACSO should be included in the Group. The visit would be in January, after the workshops.

## 6. Manzanillo

- Coastal ecosystems must be rehabilitated.
- There are 15 drainage channels leading up to the coast.
- There are slums in the coastal area.
- Rice husks are dumped directly into the mangroves and ponds. This has brought about conflicts between CITMA and MINAGRI.

## Main conclusions:

- Everywhere the main concern is recreation.
- A workshop with UNDP will be organized in December. International Consultants working on the Funding Proposal will attend this workshop. As part of the technical agenda, a mission to one of the intervention sites of the Project is envisaged.

## List of participants:

No.	Full name	Institution/Role in the Project
1.	Roberto Pérez de los Reyes	AMA / National Expert
2.	Mercedes Arellano	AMA / Specialist
3.	Sandra Loza Álvarez	ICIMAR / "MI COSTA" Project Manager
4.	Roberto Núñez Moreira	ICIMAR / Director
5.	Johan Navarro Padrón	ICIMAR / Technical Coordinator of "MI COSTA" Project
6.	Julio Baisre Álvarez	ICIMAR / In charge of component 1 of "MI COSTA" Project
7.	Enma Fonseca Arcaya,	ICIMAR / In charge of component 2 of "MI COSTA" Project

8.	Odalys Aldana Mazorra	ICIMAR / In charge of component 3 of “MI COSTA” Project
9.	Claudia Bolívar Rodríguez	ICIMAR / Geographical Information System Specialist
10.	Verónica Polo	FLACSO / Researcher
11.	Lisandra Cordero	FLACSO / Researcher
12.	Yiglén Salazar	FLACSO / Director
13.	Janet Rojas Martínez	FLACSO / Researcher
14.	Isabel Torna	AMA/ Specialist
15.	Rudy Montero	AMA / Head of the Risk Reduction Group

## PHASE II

### 4. Visit by the National Project Team to intervention areas in La Coloma and Playa Cajío on July 19<sup>th</sup> to 20<sup>th</sup>, 2018.

#### Pinar del Río/La Coloma

**Date:** July 19<sup>th</sup>, 2018

#### Purpose of the visit

- Introduce the new National Project Team to the local authorities of the province and of the Project intervention territory.
- Visit vulnerable areas and Exchange views with experts.
- Exchange views with authorities, experts, decision-makers and institutions on the findings of the visit and identify intervention actions.

#### About the visit

The National Project Team was welcomed at CITMA Delegation headquarters in Pinar del Rio by comrade Idalia Lopez Pedroso, Head of the Environmental Unit (UMA, its Spanish acronym) and other executives designated by the provincial government.

The new team in charge of the new phase of the Project (ProDoc), in this case ICIMAR, was introduced. Showing ownership of the Project, the new team made a detailed presentation of the purpose of the Project and a summary of the objectives and actions of each component. The meeting was a propitious occasion for an animated discussion between the national team and the locals, stressing the importance of training at all levels, including cadres and decision-makers of the territory. The need to see this Project as an opportunity to identify and implement adaptation measures in the coastal area was also highlighted.

The National Team insisted on the need for all to commit to the terms and objectives of the Project and the inclusion of key sectors like the National Institute of Water Resources (INRH, its Spanish acronym) to achieve feasible results. Institutions located in the community must be allies and work together, since many of their workers are dwellers of the concerned settlements, like for example, the Empresa Pesquera Industrial La Coloma.

After the meeting there was a visit to the settlement. The tour of the bathing area, which many locals call the beach, ratified the conclusions of the visit made by the previous team: it has muddy sediments; it has been deprived of sand and has been transformed as a result of erosion of storm surges caused by Hurricanes Ike and Gustav. The coastal mangrove forest has deteriorated due to indiscriminate logging for cooking purposes.

The community lacks a capacity-building center but the possibility of building one in the community or having an attached classroom in the Center located in the CITMA Delegation premises was discussed. The University, through Evelin Pérez Rodríguez as representative of the Environment Study Center

(CEMARNA, its Spanish acronym) of the University of Pinar del Río, contributed with doctoral theses dealing with environmental topics in the concerned community and is totally committed with the Project.

Agreements:

1. A meeting will be held with formal and informal community leaders, the government, and mass organizations to explain the objectives of the Project.  
Compliance Date: Next week  
Responsible: CITMA/Municipal Government
2. The local team shall prepare proposals for actions in each type of intervention to be submitted to the consideration of the national team and international consultants of the Project.  
Responsible: CITMA and ECOVIDA specialists.

The visit ended at 6:30 p.m.

**Güira de Melena/Playa Cajío**

**Date:** July 20<sup>th</sup>, 2018

About the visit

1. An initial meeting was held at the Municipal Administration Council with municipal executives.
2. Playa Cajío and the surrounding areas, namely, the wetlands close to the village, the Coastal Wetland Reference Center, the mangrove planting area, the Majahuevo Beach and part of the South Dike were visited.
3. After the visit, a meeting was held at the Municipal Administration Council where the Project and the results of the visit were presented. There was a fruitful exchange between the visitors and the locals.
4. Recommendation was made to coordinate future visits of the national team well in advance in order to guarantee the presence of all the stakeholders.
5. Emphasis was made on the fact that FLACSO would invite formal and informal community leaders since our philosophy is to train trainers to enhance existing capacities in the territory for the implementation of the Project.

**I. Main results:**

1. Progress was made in supporting local authorities for the implementation of the Project. Working relations were established with Madelaine Domínguez García, CITMA Chief Specialist in the province, who has been working with the Project from the outset and is the Project Coordinator in the Güira de Melena Municipality. She lives in the Municipality. Her e-mail is: [madelaine.dominguez@gobart.gob.cu](mailto:madelaine.dominguez@gobart.gob.cu) and her phone number is 047-35-4646.
2. Informal community leaders, so important for the implementation of the Consultation Plan, were identified and contacts were made with them.

Comrade Vicente Núñez is an informal leader. He works in Forestry and though he lives in La Boca village he is very much respected in Playa Cajío (both villages belong to the same People's Council.) He has established a coastal wetland reference center and actively collaborates with the UNDP/FA Manglar Vivo Project. He holds workshops on these topics with children and adults in this settlement. He is a humble person with very vast knowledge of Playa Cajío's ecosystem.

Comrade Gilberto is an informal leader born in the village. His family is one of the few native families still living in the settlement. He has a lot of information about the population and existing problems in Playa Cajío. He participated in the visit made in December 2017 by the National Project Team, UNDP-Cuba and international consultants.

3. The existence of a building-capacity center and of the CUM was confirmed. Professors of the CUM take part in the training activities and hold seminars whenever they are invited to do so by the government. We were told to contact professor Adalberto (from the University of Artemisa, who lives in Güira) and professor Ismael (of the Güira CUM, who also lives in Güira.)
4. Contacts were made with Ismael Martínez López, professor of the CUM. His e-mail is estanislao ml@uart.edu.cu and his phone numbers are 047-42-3990 (office) and 047-42-3550 (home). Ismael was a teacher in the primary school of Playa Cajío for ten years and he knows a lot about the village and its peculiarities.

He shared with us a Power Point on his research entitled "*La Tarea Vida desde la escuela primaria Julio Sanguily del Consejo Popular Playa Cajío en el municipio Güira de Melena*" (*Task Life at the Julio Sanguily Primary School in the Playa Cajío People's Council, Güira de Melena Municipality*) with which he intends to improve and enhance the knowledge and training of the children living in Playa Cajío to face climate change impacts and replicate their knowledge within their families.

5. Based on the conversations held with knowledgeable persons about the village, the following peculiarities of the intervention area were determined:
  - There is a community working group in Playa Cajío made up by formal and informal leaders.
  - Around 80% of the population of Playa Cajío is not native. Many of its dwellers come from the Eastern Provinces and have settled in the houses abandoned by the villagers of Playa Cajío who have been resettled in Güira.
  - The province has coasts, but the sea administratively belongs to Batabanó (Mayabeque), therefore fishermen are subordinated to that administrative area.
  - Mangroves are not very popular among the villagers. For the villagers, the view over the beach is very important.
  - Many families in Cajío have a member who has illegally migrated to Caiman Islands.
  - Women play an important role as heads of households.
  - One of the main problems for the villagers is the water supply, a service frequently interrupted.
  - The only bathing area near to the village is Majahuevo Beach. It is one kilometer away and extends over an area of about 100 meters. In terms of recreation, it is the only option near the village for the population. Beach conditions are not so good. It is full of rocks due to the erosion of the road that runs directly in front of it and of the boundary wall. Besides, mangrove is

growing spontaneously. During the visit there were around 30 to 40 persons in the beach, mostly children. Some families were making a bonfire under the trees.

#### List of Participants:

No.	Full name	Entity
1.	Nora Santalla García	CITMA Municipal Expert
2.	Evelin Pérez Rodríguez	Pinar del Río University
3.	Manuel Ramírez Blanco	Banco de Crédito y Comercio
4.	María T.Valdés Echevarría	Municipal Hygiene and Epidemiology Unit
5.	Maypú Martínez Sánchez	Empresa Pesquera Industrial La Coloma (La Coloma Industrial Fishing Enterprise)
6.	Eduardo Espinosa Pantoja	Provincial Soils Division
7.	Yasmani Hernández González	Provincial Soils Division
8.	Idalia López Pedroso	CITMA Territorial Delegation
9.	Felipe Madrazo Escalona	CITMA Territorial Delegation
10.	Jorge Ferro	Centro de Investigaciones y Servicios Ambientales (ECOVIDA) (Environmental Research and Service Center)
11.	Isabel Torna	AMA / Expert
12.	Sandra Loza Álvarez	ICIMAR /Project Manager
13.	Johan Navarro	ICIMAR / Technical Coordinator
14.	Julio Baisre	ICIMAR / In charge of Component 1
15.	Claudia Bolivar	ICIMAR/Specialist in Geographical Information System
16.	Berto Jiménez	Sport Fishing Federation
17.	Emma Fonseca	ICIMAR / In charge of Component 2 of the Project
18.	Odalys Aldama	ICIMAR / In charge of Component 3 of the Project
19.	Yiglén Salazar	FLACSO

#### 5. Visit by the National Project Team to intervention areas in Júcaro from August 1<sup>st</sup> to August 3<sup>rd</sup>, 2018.

##### Ciego de Ávila Settlement

**Date:** August 1<sup>st</sup>, 2018

Meeting held at the Ciego de Ávila Provincial Government Headquarters; from 4:30 to 6:30 p.m.

#### Purpose of the meeting

- Introduce the new National Project Team to the local authorities of the province and of the Project intervention territory.
- Exchange views with authorities, experts, decision-makers of the territory about the object of the intervention.

The meeting was attended by the following government actors: Ciego de Avila Provincial Vice-President; President of the Venezuela Municipality; Acting Vice-President of the Venezuela Municipality; President of the Administration Council of Venezuela; Foreign Relations Official of the Provincial Peoples Power, and CITMA Provincial Delegate.

It was also attended by the following economic and service institutional actors: the Soils Department; Forest Department of MINAGRI; Foreign Relations Department of MINAG; Environmental Unit; Agroforestry Enterprise; Urban Planning Division; Flora and Fauna; Meteorology; Coastal Ecosystem Research Center; Forest Rangers Corps; Provincial Water Resources Enterprise; and Agricultural Biotechnology Research Center.

The CITMA Provincial Delegate stated that there are several ongoing climate change-related projects in the territory. They have previous cooperation experience with the Sabana-Camaguey Project. The water for the Northern Keys comes from the northern part of the province (50 km) Nine kilometers of beach have been transformed in the northern keys. There is a communication campaign to protect the environment in the northern keys.

The Ciego de Avila Provincial Vice-President stated that there are points of convergence in the interventions to be carried out and that some issues raised under the Project have already been surveyed in the province.

#### **Visit to the Júcaro Community and the Venezuela Sugar Mill**

**Date:** August 2<sup>nd</sup>, 2018

**Time:** 9 a.m.

**Participants:** National Team and International Consultants

#### **Purpose of the visit:**

- Visit the Júcaro Community and the Venezuela Sugar Mill (where the Capacity-Building Center is located.)
- Exchange with the authorities, experts, decision-makers and institutions about the results of the visit.
- Identify intervention actions.

The National Team was welcomed by the First Secretary of the Party in the Venezuela Municipality; the member of the National People's Power Assembly for the Venezuela Municipality; the President of the



People's Council of Júcaro; the President of the Venezuela Municipality; the CITMA Provincial Delegate; the Director of the Environmental Unit; and the CITMA Venezuela Municipality Delegate.

The President of the Venezuela Municipal Administration Council provided the following information:

**Characterization of the Júcaro Community in the Venezuela Municipality in the Province of Ciego de Avila:**

The Júcaro Community is the center of the Júcaro People's Power of the Venezuela Municipality in the Province of Ciego de Avila. It is located in the buffer zone of the Jardines de la Reina National Park and *Cayos de Ana María* Wildlife Refuge protected area, 32 kilometers from Ciego de Avila city and 17 kilometers from Venezuela its municipal head. The sea coast area is accumulative, with a swampy floor, in some stretches with muddy sand and coral formations. The low-lying coast is less than 5 meters deep. As to the winds, they are predominantly from the South and Northwest.

**Population:** The population in Júcaro is 1,581 inhabitants, out of which 806 are male and 775 are female, for a total of 555 households.

**Main economic activity:** Its main economic activities are fishing, tourism-related nautical activities where the Marlin Jardines de la Reina, a subsidiary of Azulmar Marina based in the Júcaro Port operates. The Director of Marlin Subsidiary pointed out in an interview that they have 150 workers, out of which only 23 are women who work cleaning ship cabins, as office secretaries or in accounting. From a gender perspective, the traditional roles of women prevail. Besides, most of the women in Júcaro are housewives.

**Services provided to the population:** The community has primary health care services such as: two medical offices, a pharmacy and a dental clinic. In terms of education, it has the "Ramon Dominguez de la Peña" Primary School. Secondary and pre-university education is received at the Venezuela People's Council, 8 kilometers away from Júcaro. There are no day care centers in Júcaro and the closest is in the Venezuela People's Council.

Dalia Aguiar, member of the National Assembly of the People's Power, pointed out in an interview that children in the secondary or pre-university education level must take public transportation to attend school. She said mobility is not a problem. There is a train (3 times a day) and a bus (3 times a day) that they take, depending on their school schedule.

Regarding domestic trade, there is a food store, a meat shop, a bakery, a shop for industrial products, an agricultural product market and two outlets selling in convertible currency which belong to the TRD and CIMEX chains. There is also a state-owned bar-restaurant and a cafeteria, as well as 4 private cafeterias.

In terms of culture, there is a movie theater, a reading room (with an exhibition that we visited, see photos attached) and a house of culture.

Telephone services have expanded and there is a meteorological station located in the community that is connected to the National Meteorological Network. There is also a Flora and Fauna station.

**Main social and environmental problems:** The Palmarito settlement (the most vulnerable area located in the coastline) faces sea penetration and saline intrusion risks. It has many houses in very poor

construction conditions and located 5 meters away from the coastline. Hurricane Irma damaged 290 houses, out of which 114 totally collapsed. The annual housing plan includes 72 new houses, out of which 40 will be apartments in the Macizo Cañero, 12 with state investment, 16 built by the families themselves, and 4 with state subsidies.

According to the President of the People's Council of Júcaro, people have greater risk perception after Hurricane Irma. They have become aware of the danger of living so near the sea. On the other hand, resettlement is a very sensitive issue given their fishing culture. The government is respecting their decisions and needs. They ask the villagers who their neighbors were and if they wish to continue being neighbors. If they wish to continue having the same neighbors his/her house is built near them.

As soon as the new house is received, the old one is demolished and the land becomes the property of the Flora and Fauna Station located in that territory.

Forest cover damages, loss of biological diversity and deterioration of the ecosystems were also identified. Modification and loss of habitats is mainly associated with deforestation, forest fires, salinization and the unfinished South causeway, which interrupts water flow that cleans up the sea bed. Other examples are the existence of a 2 km area of swamp forest with no vegetation, the accelerated process of coastal erosion in some parts of the coast, mangrove logging affecting the mangrove ecosystem and the species living behind the red mangrove that do not tolerate high salinity levels.

There is contamination and poor hygiene and sanitary conditions in human settlements. Liquid waste is dumped into the sea. In Palmarito there are no sewage or liquid waste treatment systems. Waste is disposed of in pits and latrines and in some cases in open-sky drainage channels and pipes leading directly into the sea. There is inadequate location of solid waste disposal sites and poor garbage collection. There are uncontrolled micro-dump sites and lack of garbage collectors. The dump site is located in a low-lying area and within the village. Poor rainfall run-off.

### **Visit to the Venezuela Sugar Mill**

**Date:** August 3<sup>rd</sup>, 2018

The Capacity-Building Center is located here. The Center has relations with the National Association of Farmers, ACTAF (Cuban Association of Agricultural and Forest Technician) (extension work) and with the Municipal and Provincial Urban Planning Divisions. It has social and environmental promoters. The Capacity-Building Center provides the Civil Defense with the findings of the Hazard, Vulnerability and Risk Studies. It has taken up the role of Risk Management Center (Risk Reduction Studies). Therefore, under the Project, it should report environmental vulnerabilities, establish indicators for monitoring purposes and generate environmental information products.

### **Contacts:**

Vizney Toledo Boñobre, President of the Government of the Venezuela Municipality Phone: 033-4916-77 (office); cell phone: 5288-6563.

Idelsi Ramírez Roque, CITMA Delegate in the Venezuela Municipality  
e-mail: [espvenezuela@fica.inf.cu](mailto:espvenezuela@fica.inf.cu)

Bernardo Hernández, Vice-President of the Municipal Administration Council in charge of Defense and Religious Affairs

Phone: 033-4910-07 (office); cell phone: 5210-1387

Dalia Aguiar González, Member of the National Assembly for the Venezuela Municipality

Cell phone: 5445-7367

As a result of the tour, the level of commitment of the actors involved in terms of participation and co-financing was confirmed. Information required for cost-benefit analyses of the interventions as well as about the equipment and technologies required by each intervention actor/site involved was also obtained. Information required for updating intervention action maps at territorial level and confirmation of aspects to be considered in the design of Public Consultation tools that will be applied in the selected communities was also obtained. All the activities to be implemented in each of the intervention areas of the Project were confirmed, taking into consideration the environmental and social safeguard criteria.

#### List of participants:

No.	Full name	Entity
1.	Vizney Toledo Boñobre	Municipal Administration Council
2.	Bernardo Hernández	Municipal Administration Council
3.	Sandra Loza Álvarez	ICIMAR /Project Manager
4.	María del Carmen Olivera	CITMA Territorial Delegation
5.	Idelsi Ramírez Roque	CITMA Municipal Expert
6.	Rafael González-Abreu	INRH Territorial Delegation
7.	Rafael Hernández	INRH Territorial Delegation
8.	Johan Navarro	ICIMAR / Technical Coordinator
9.	Julio Baisre	ICIMAR / In charge of Component 1
10.	Claudia Bolivar	ICIMAR/ Geographical Information System
11.	Emma Fonseca	ICIMAR / In charge of Component 2
12.	Isabel Torna	AMA / Expert
13.	Gricel Acosta	UNDP
14.	Tomás Escobar	UNDP
15.	Verónica Polo	FLACSO / Researcher
16.	María Isabel Domínguez	FLACSO / Researcher
17.	Montserrat Xilotl	International Consultant
18.	Sohinee Mazumdar	International Consultant
19.	Néstor Windevoxhel	International Consultant
20.	Jose Antonio Pérez	President of Júcaro People's Council
21.	Dalia Aguiar González	Member of the People's Power National Assembly

#### 6. Evidences of the Validation Workshop held from October 22<sup>th</sup> to 26<sup>th</sup>, 2018.

The national validation workshop for the Document Project was held in Havana from October 22<sup>th</sup> to 26<sup>th</sup>, 2018 with the participation of representatives of all the national institutions involved in the Project as well as all local actors of the provinces located in in the intervention areas of the Project. A Board Work meeting was held to exchange views on technical issues between the National Team and International Consultants, with the participation of local actors.

The workshop validated all the information processed to date regarding confirmation of interventions/activities foreseen for each of the intervention areas of the Project, taking into consideration the social and environmental safeguard criteria; the commitment of the actors involved in terms of participation and co-financing; the definition of baseline indicators and potential mid-term and final goals; the cost-benefit analyses of the interventions; the equipment and technologies required by each intervention actor/site involved; the updating of local intervention action maps; validation of estimated beneficiaries, and interaction with key actors. The results of the Public Consultation tools implemented in the selected communities were also shared.

**WORKING SESSIONS OF THE NATIONAL GREEN CLIMATE FUND PROJECT TEAM WITH INTERNATIONAL CONSULTANTS DURING THEIR SECOND MISSION TO CUBA TO VALIDATE THE “MI COSTA” PROJECT PROPOSAL**  
**From October 22<sup>th</sup> to 26<sup>th</sup>, 2018**  
**UNDP**

No.	Full name	Institution/Role in the Project
<b>Participants: UNDP, National Project Team, and International Consultants</b>		
1.	Lyes Ferroukhi	UNDP / Head of the Environment and Regional Energy Team
2.	Simone Bauch	UNDP / Expert in biodiversity finances
3.	Marcela Busnelli	UNDP / International Consultant for the formulation of the Project
4.	NestorWindevoxhel	UNDP/International Consultant for Project formulation
5.	Roberto Pérez de los Reyes	AMA / National Expert
6.	Sandra Loza Álvarez	ICIMAR / “MI COSTA” Project Manager
7.	Roberto Núñez Moreira	ICIMAR / Director
8.	Johan Navarro Padrón	ICIMAR / Technical Coordinator of “MI COSTA” Project
9.	Julio Baisre Álvarez	ICIMAR / In charge of component 1 of “MI COSTA” Project
10.	Enma Fonseca Arcaya,	ICIMAR / In charge of component 2 of “MI COSTA” Project
11.	Odalys Aldana Mazorra	ICIMAR / In charge of component 3 of “MI COSTA” Project
12.	Claudia Bolívar Rodríguez	ICIMAR Geographical Information System Specialist
13.	Verónica Polo	FLACSO / Researcher
14.	Jorge Alfredo Carballo Concepción	FLACSO / Researcher
15.	Marta Muñoz Campos,	FLACSO / Director
16.	Janet Rojas Martínez	FLACSO /Researcher
17.	Rudy Montero Mata	AMA / Head of the Risk Management Group
18.	Maritza González	AMA / Program and Project Manager
19.	Julio César Rodríguez	IES- Manglar vivo National Project team
20.	Gricel Acosta	UNDP / Officer of the Environment and Energy Area
21.	Yamilka Caraballo	UNDP / Program Analyst of the Environment and Energy Area
22.	Tomás Escobar	UNDP/ Program Analyst of the Environment and Energy Area
23.	Patricia Fernández	UNDP/ Program Partner of the Environment and Energy Area
24.	Elizabeth Céspedes, UNDP	UNDP/ Program Partner of the Environment and Energy Area
25.	Daimy Collado, PNUD	UNDP/ Assistant of the BIOFIN Initiative

Participants/key actors of the intervention areas of the Project		
26.	Jorge Ferro Díaz	ECOVIDA
27.	Adolfo Luis Sandín López	Provincial Forestry Division
28.	Madeleine Domínguez	CITMA, Güira Melena
29.	Loreta Muñoz Jane	INRH Provincial Division
30.	Rodrigo Fernández Moreno	Forestry State Division
31.	Bernardo González	CITMA, Mayabeque
32.	Jorge Alberto Cano Martínez	INRH Provincial Division
33.	Dainier Guerra Peña	Forestry State Service
34.	María del Carmen Olivera	Head of the Environmental Unit of CITMA, Ciego
35.	Héctor Bencomo Benítez	CITMA
36.	Rafael Hernández	INRH Provincial Division
37.	Rafael González-Abreu	Empresa Aprovechamiento Hidráulico (Water Use and Management Enterprise)
38.	Lisbeth Font Vila	Environmental Unit, CITMA
39.	Marta Suárez Acuña	INRH Provincial Delegation
40.	Nelson Figueroa Morel	Forestry State Service
41.	Manuel LaO Arias	Jorge Dimitrov Institute
42.	Ángel Sánchez Tamayo	INRH Provincial Division
43.	Pedro Soto Perdomo	Provincial Agriculture Delegation

## B. Reports on the implementation of Public Consultation tools in selected

### 7. Results of the implementation of Public Consultation<sup>6</sup> tools in Santa Cruz del Sur, Camaguey Province from September 16<sup>th</sup> to 18<sup>th</sup>, 2018.

In the Public Consultation in the Municipality of Santa Cruz del Sur, the FLACSO team applied a tool (see Annex 1) to the different local actors with which they met, with the purpose of knowing their views prior to the implementation of the Project, as well as the potential environmental and social risks, their contributions and experiences.

Besides enabling a gender differential analysis to foster an effective participation of both men and women in the climate-change adaptation strategies of the communities, Participatory Mapping techniques were used to identify those settlements that could be benefitted with the Project (besides the Santa Cruz del Sur settlement), according to the experience of the social actors participating in the activity, as well as to identify climate change-related environmental problems in the community.

The questions were the followings:

1. Do you believe that Climate Change affects men and women equally? Why?

<sup>6</sup>The design and implementation process of Public Consultation tools was led by the Cuba Program of the Latin American School of Social Sciences (FLACSO) of the University of Havana (UH), under the Ministry of Higher Education (MES). It included Interview and Participatory Mapping tools. Formal and informal leaders participated in the application of the tool at the local level.

2. Do you believe that persons living nearer to the sea are more vulnerable to climate change impacts? Why?
3. Do you believe that persons with more unfavorable living conditions are more vulnerable to Climate Change impacts? Why?
4. Which persons and/or social groups do you believe are more vulnerable to Climate Change?
5. Which information products do you believe are more useful for people to learn more about Climate Change adaptation?
6. If people feel that they are adversely affected by any of the actions under the Project, where can they go to? Do you know about any mechanism for this purpose?

Twenty-two (22) interviews were held with local actors from the following institutions: Municipal Administration Council (2); School of Cadres (1); Municipal University Center (1); University of Camagüey (1); Municipal Public Health Division (1); Municipal Education Division (1); Provincial Urban Planning Institute (1); Municipal Urban Planning Division (1); Housing (1); Agriculture Delegation (2); Flora and Fauna (Wildlife) (2); Fisheries (1); Water Use and Management Enterprise (1); Strategic Forest Services (1) and CITMA Municipal Delegates (2).<sup>7</sup>

### Interview Analysis

To the first question on whether Climate Change impacted men and women similarly, 19 social actors (i.e. 86.36%) replied it did *“as men and women are part of the society”; “climate change adverse impacts know no sex differences and affect us all”; “we live in a society where we all enjoy the same weather”; “it affects men and women alike, as it impacts us economically and socially”; “we all live in the same planet”*.

Only one individual claimed climate change impacted men and women differently *“it does not affect us all in the same manner, women are impacted the worst, given their traditional chores and roles within the household, including water supply, and cooking; aside from the existing sexist patterns”*<sup>8</sup>; and two did not answer the question. Therefore, it may be inferred that key social actors within the community neither identify nor perceive differences between men and women when it comes to Climate Change adverse impacts.

To the question: *“Are people who live closer to the sea more vulnerable to Climate Change?”* the majority (n=20), i.e. 90.90%, replied affirmatively. The most frequent views were: *“they are most exposed to natural disasters and suffer the worst impacts”; “due to floods and saline intrusion”; “they are directly hit”*. Two social actors said *“it affects all people, not only those who live by the sea”*<sup>9</sup>.

When asked whether people with unfavorable living conditions were most vulnerable to CC, all those interviewed said yes arguing that *“they are more vulnerable because they don’t have appropriate housing”; “their household economic situation prevents them from taking steps to minimize CC impacts, although they may have a higher level of risk awareness”; “their houses are not resistant to floods”*;

<sup>7</sup> Three social actors did not state the institution they belong to.

<sup>8</sup> Professor of the University of Camagüey.

<sup>9</sup> Social actors interviewed (a secretary of the Municipal Administration Council CAM and an elementary school teacher).

*“they have lesser means”*. The problems that were more frequently raised were poor housing conditions and low incomes.

Children, elders and disabled people were the most frequently mentioned (54.54%), as the most vulnerable social groups to Climate Change; although it is worth noting that agriculture and wildlife were ranked second.

When a correlation was established between the social actors and their jobs, it was evinced that most of the respondents who said agriculture and wildlife were the most vulnerable to Climate Change were specialists from CITMA; the local delegations of the Ministry of Agriculture; Flora and Fauna (Wildlife); Fisheries; and the enterprises for Water Resources Use and Management (Empresa de Aprovechamiento Hidráulica) and Forestry Strategic Services.

The media they considered most useful to raise community members’ awareness on Climate Change Adaptation were radio, community debates and television. (See figure 1). Likewise, the products they considered could be feasibly produced locally and at community level were audiovisuals, educational softwares, thematic maps, interactive web sites, multimedia products, specialized lectures, and vocational guidance clubs, among others.

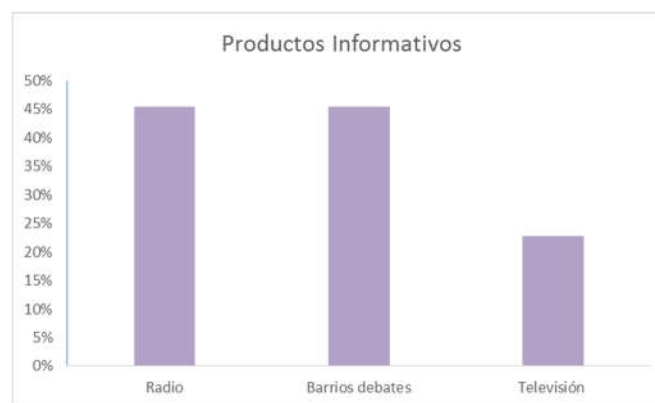


Figure 1. Source: Drawn up from social actors interviews from Santa Cruz del Sur settlement and municipality, province of Camagüey.

When asked who people adversely affected by some Project actions could turn to; most social actors (n=15), i.e. 68.18%, said to the Municipal Government; three said that to the project monitoring team and four didn’t answer. Additionally, all respondents said they weren’t aware of any grievances redress mechanisms in case they were adversely affected by project interventions.

### Participatory Mapping

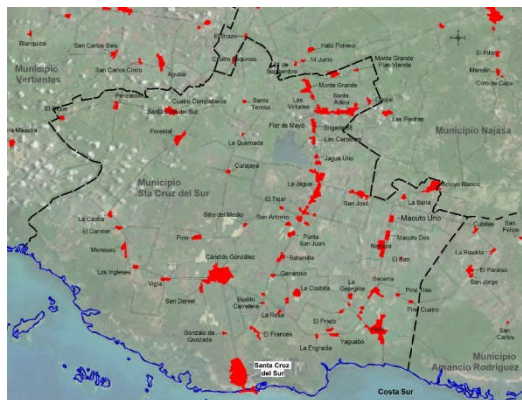
Participatory mapping techniques were used to identify settlements that could benefit from the Project (besides Santa Cruz del Sur), according to participating social actors views. Likewise, existing Climate Change environmental problems in the community were identified.

To that end, each participant was handed a printed Google Earth satellite photo with the location of all Santa Cruz del Sur municipality settlements (Figures 2 and 3). They were asked to locate the settlements they thought could benefit from the Project as a result of coastal ecosystem rehabilitation actions (namely, mangrove planting and other ecosystem services), training activities, as well as from workshops and information and climate-related products developed.



They took into account existing social and economic relations between the Santa Cruz del Sur settlement, where the municipal seat lies, and the other settlements of the municipality (including employment, utility, infrastructures, recreational areas and facilities like beaches, vacation homes).

Then, they were given another satellite photo, specifically of the Santa Cruz del Sur settlement where the actors identified and located Climate Change-related environmental problems that currently affect the community. On the lower right of the worksheet a blank space was left for them to design their own legend, after a brief explanation (Figure 3).



Figures 2 and 3: Printed satellite photos handed out to local leaders to collect information.

Using Geographic Information Systems<sup>10</sup> (GIS), the information compiled from the maps developed by each work team was repositioned (See Annex 7), and FLACSO team mapping specialists, developed two summary maps, one of settlements benefitted by the project (Figure 4) and another with existing environmental problems in the settlement (Figure 5); using as primary source the views of local leaders who took part in that activity.

<sup>10</sup> System that integrates ICTs, population and geographic information and its main objective is to capture, analyze, store, edit and represent georeferenced data (Korte, 2001). Spatial analysis tool used to manage spatial data, i.e. elements that have a location; analyze that data and produce outputs/deliverables like maps, reports, charts, etc. (Olaya, 2014).



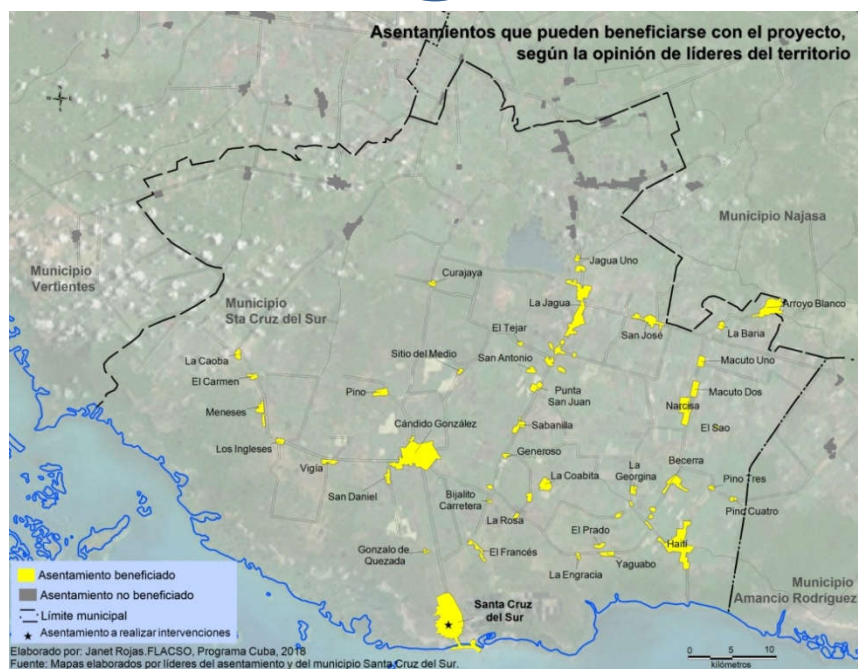


Figure 4: Map of settlements that could benefit from the Project according to Santa Cruz del Sur settlement and municipal leaders.

Most leaders agree that settlements closest to the sea or to the Santa Cruz del Sur settlement will also benefit from Project actions; specially the other two urban towns of the municipality, i.e. Cándido González and Haiti (less than 15 km away from the intervention site), with a population of approximately 4,400 habitants, respectively<sup>11</sup>. *“I think those closest to the sea will benefit the most, considering the size of their population and their existing infrastructures”<sup>12</sup>.*

Likewise, actors repeatedly referred to benefits for rural hamlets and villages located northwest of the Santa Cruz settlement, from La Caoba to Vigía, and other rural towns and dwellings, located between urban settlements Cándido González and Haiti (Figure 4).

Some identified an area in the vicinity of the Najasa<sup>13</sup> dam channel: *“If the aquifer is recharged with surface waters from the reservoir through channels and infiltration wells, the volume of the groundwater aquifer would increase, subsequently washing away the salt wedge affecting the settlements”<sup>14</sup>.*

One actor pointed out that *“all settlements in the municipality could benefit from the Project, if it could contribute to harvest and storage rainwater as water supply source for the population in each community or improve the quality of water”<sup>15</sup>.*

<sup>11</sup> Settlement Nomenclator of the 2012 Population and Household Census.

<sup>12</sup> Senior specialist of CITMA's Environmental Unit.

<sup>13</sup> Secretary of the Municipal Administration Council (CAM).

<sup>14</sup> Representative of the Water resources use and management enterprise (Empresa de Aprovechamiento Hidráulico.)

<sup>15</sup> Representative of the National Institute of Water Resources (INRH).

On the other hand, some participants, without making any reference to the location, shared more specific views<sup>16</sup>, and went on to name local agricultural entities from the municipality as potential beneficiaries, including Credit and Services Cooperatives (CCSs)<sup>17</sup>; Basic Units of Agricultural Cooperative Production (UBPCs)<sup>18</sup>, Agricultural Production Cooperatives (CPAs)<sup>19</sup> and Basic Business Units (UBEs/LOBs)<sup>20</sup>.

As a result of this second part of the Participatory Mapping experience, the Climate Change-related environmental issues identified in the settlement and located in the photos were: floods caused by tidal waves, floods caused by extreme weather events<sup>21</sup>, deforestation, coastal degradation, solid wastes and high salinity (Figure 6).

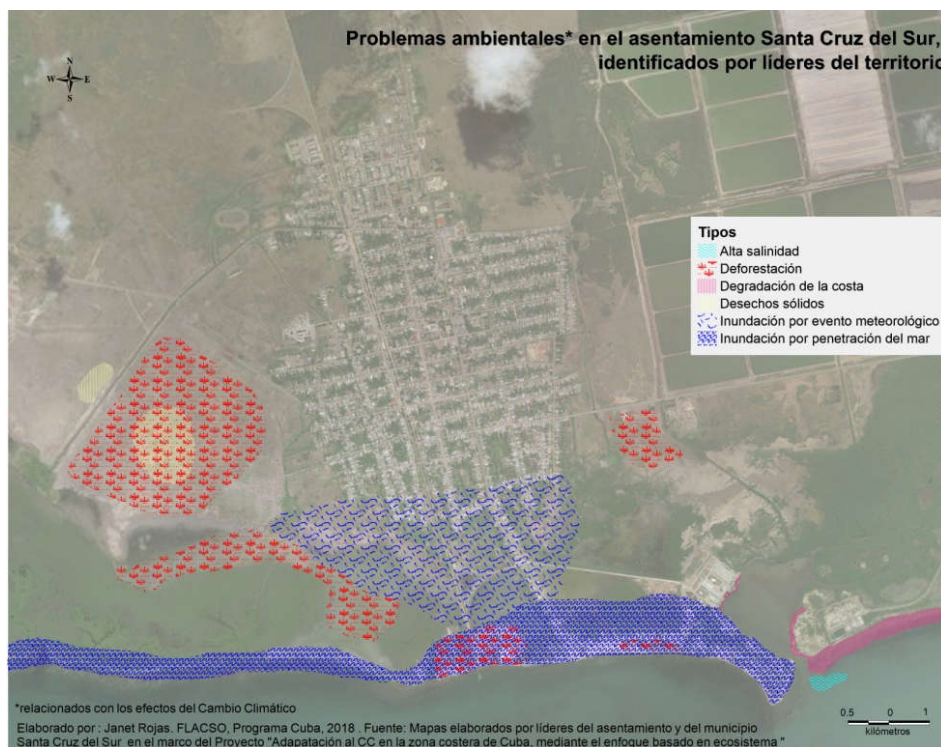


Figure 5: CC-related environmental issues in the Santa Cruz del Sur settlement, according to leaders of the Santa Cruz del Sur settlement and municipality.

Floods caused by tidal waves was the main issue identified by 59.1% of participants (Figure 6), which they located along the entire coastal area, but extending it further landward, up to where the Santa Cruz del Sur settlement was originally located. In this area is where most of the floodwall built to try to protect the community from the waves is found.

<sup>16</sup> Representative of the local Agriculture agency and forestry services enterprise.

<sup>17</sup> Horacio Curbelo, Antonio Maceo, Celia Sánchez and Cándido González.

<sup>18</sup> 9 de Noviembre and Mártires de la Caolite.

<sup>19</sup> Mártires Pino # 3.

<sup>20</sup> El Olimpo and El Carmen.

<sup>21</sup> Southerly winds and others, they haven't always been caused by extreme weather events.

The second problem was deforestation (36.4%), mainly linked to the loss of mangrove, there are only a few patches left along the coastal and sandy areas that stretch the most to the West, where most of the settlement population and urban development is concentrated. That suggests, there's a need to undertake differentiated reforestation actions according to the type of vegetation and characteristics of the coastal ecosystems. Coastal degradation, particularly in the Eastern coastal area where the Wildlife enterprise is located, was another of the most frequently referred issues by local actors (22.7%) (Figure 6).

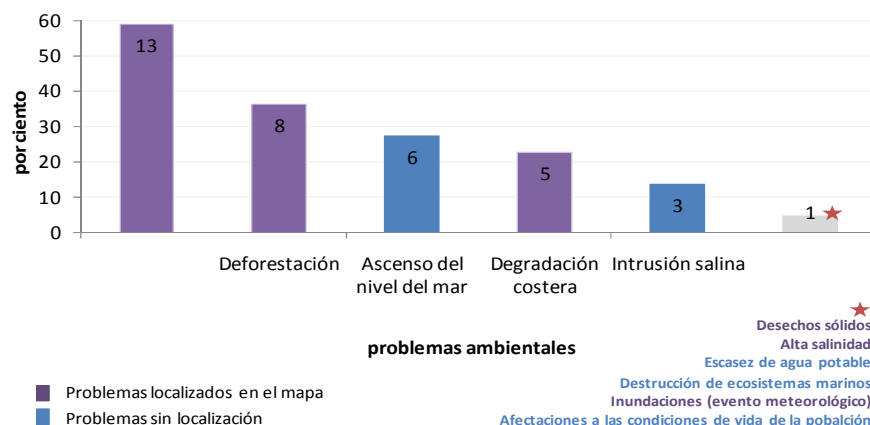


Figure 6. Environmental problems identified in the Santa Cruz del Sur settlement according to the views of local social actors. Source: Information collected during the Participatory Mapping exercise with Santa Cruz del Sur settlement and municipal local actors, province of Camagüey.

The use of maps and specifically of the participatory Mapping tool, to collect georeferenced data, is a technique that is not widely used in Cuba, and there are no known references that it has been previously used in ecosystem-based Climate Change Adaptation studies. Therefore, some of the participants (6), did not locate environmental problems on the map, but rather described them.

Among those, they first identified the sea level rise, saline intrusion, the shortage of fresh water supply, the destruction of marine ecosystems and their adverse impact in people's living conditions (Figure 6).

The contamination of water as a result of saline intrusion was often mentioned. *"The water supply source of the Santa Cruz settlement are groundwaters from a series of wells located around 10 km upstream of the community that is pumped to water towers. The water in the wells is already being contaminated by saline intrusion that is advancing as a result of the exploitation thereof and of others that during the dry season, water was extracted below their zero level and non-renewable reserves<sup>22</sup>".*

The map where social actors identified settlements that could somehow benefit from the project, could serve to determine the spatial extent thereof, in terms of number of people and entities to be benefitted in the territory. On the other hand, the map of environmental issues could help identify the types of interventions and the sites where they could be carried out (target sites).

<sup>22</sup> Representative of the Water resource use and management enterprise.

## Summary

All local actors convened took part in Public Consultation planned activities, which shows a high level of engagement, involvement and interest in the Project.

Over 50% of local actors do not identify nor perceive any gender differences in terms of Climate Change adverse impacts and related problems.

All local actors agreed that people with less favorable living conditions are more vulnerable to CC impacts.

Most local social actors pointed out that children, elders and disabled persons are the most vulnerable groups to CC impacts.

The media they considered most useful to raise community awareness on CCA were radio, community debates and television.

Products they considered feasible for local production at community level were audiovisuals, educational softwares, thematic maps, interactive web sites, multimedia products, specialized lectures, vocational guidance clubs, etc.

During the Participatory Mapping exercise, most local leaders agreed that settlements closest to the coast or to the Santa Cruz del Sur settlement, will also be benefitted by Project actions; particularly, the other two urban towns of the municipality, i.e. Cándido González and Haiti (less than 15 km away from the intervention site).

The main environmental problems identified by local leaders were: deforestation, the sea level rise, coastal degradation and saline intrusion.

## 8.- Results of Public Consultation tools implementation in La Coloma, September 21<sup>th</sup>, 2018.

Eighteen local actors were interviewed<sup>23</sup> from the following institutions: Municipal Administration Council (1); President of La Coloma People's Council (1); Municipal Education Division (5<sup>24</sup>); Representative of the Municipal Culture Division (Community Cultural Promoter); Representative of the Cuban Women's Federation (1); Representative of the Committees for the Defense of the Revolution (1); Chief of the Local (1); Workers of La Coloma Fisheries Enterprise (2); Representative of Energy and Fuel (1); CITMA Specialists (2); Representative of Retail Stores and Restaurants (1).<sup>25</sup>

To the question on whether Climate Change impacted men and women alike, no perception of differences was expressed by the men and women interviewed. A total of 16 out of the 18 respondents (i.e. 89%) said that climate change affected men and women equally.

When asked why, those interviewed said that men and women were equal (shared the same characteristics and management power), lived in the same community and had no way to avoid

<sup>23</sup> Nine women and nine men.

<sup>24</sup> Principal of the Middle School; two teachers of the Special School; the Principal and a teacher of an elementary school.

<sup>25</sup> One social actor made no reference to the institution it belonged to.

suffering similar climate change consequences. One person didn't answer the question and other said men were most affected; but failed to explain.

Concerning climate change risk perception, 94% of respondents admitted they were aware of climate change and its consequences for Cuba (only one person said nothing about that). They acknowledge floods caused by tidal waves as the main adverse impact.

They classified their community as “a coastal and fisheries area” on the basis of its distinctive natural, physical, economic and social characteristics. Over 60% respondents (11 out of 18) explained the link of the community with fisheries, as the main industry and livelihood of its inhabitants, hence they identified themselves as a “*fishermen's village*”.

The theme of sea and fisheries are symbols of La Coloma's identity, that are deeply rooted in the minds of community members and the way in which they relate and interact with it. They also mention as other distinctive features, the existence of mangrove around the community and the presence of fisheries industry production units that contribute to the national economy.

Among the key climate change impacts that affect them, they identified, first, floods by tidal waves (39% of respondents), followed by hurricanes (28%) and soil salinity (28%), for its adverse impacts on arable land and food production. Other negative impacts they mentioned were: saline intrusion, mangrove degradation, temperatures increase, heavy rainfall and draughts.

They also identified other climate change impacts that adversely affect the life and development of the municipality as the loss of arable land and subsequent negative repercussion in agriculture and food production (39%), aquifer salinization (28%) and floods by tidal waves (28%).

When asked about factors that make them vulnerable to climate change adverse impacts, half of those interviewed (56%) emphasized the community's geographic characteristics that as it is located in a low-lying coastal area, is highly prone to floods.

Most respondents (72%) identified children as the most vulnerable group to climate change impacts as they have less risk perception and are more sensitive to illness and extreme temperatures. Likewise, they identified elders as another risk group, as well as people who live in coastal areas.

A **control question** was added to the interview about the vulnerability perception of people living along the coastal margins. All those who answered the question (17 out of 18) agreed that people living in coastal areas are most vulnerable to climate change impacts. Among the reasons they argued were that they: “*are at greater flood risk*” (88%), “*are worst hit by strong winds and rely heavily on the sea as their main source of food*”.

When asked about actions taken in the territory to minimize climate change impacts, 94% of those who answered the question said “*actions of that kind were undertaken*” (15 said “yes”, 1 said “no” and 2 refused to answer).

Actions undertaken include: waste collection (mainly along beaches and by the seashore) (56% of respondents), mangrove reforestation (44%), clearing of drainage channels (17%), environmental festivals (11%), species conservation (11%), educational talks (11%) and contests (11%). Percentages aren't as high as some of these actions were not recurrent; but it is worth noting the long list of actions



that were indeed undertaken. That could be due to the fact that a lot of initiatives are organized sectorally; but there isn't a unit that links all sectors and the community.

However, despite the high number of actions listed as carried out in the community to minimize climate change impacts, it may be discerned that there is a low participation rate among those interviewed. Only half of respondents said they had been involved or taken part in those activities.

Out of the nine persons who said they had taken part in these activities, four specified they had attended "*environmental festivals*", two were involved in "*waste collection*", and one wrote its master's degree thesis on coping with climate change.

When questioned about ***traditional practices*** existing in the community that could contribute to mitigate climate change adverse impacts, it became clear they didn't understand very well. Half of those interviewed didn't answer the question. Those that did respond identified the following as environmentally-friendly traditional practices: waste collection along beaches, the bay, the sea bed; animal species conservation practices; mangrove planting and mangrove felling ban; as well as people's evacuation experiences.

The information products they considered more useful to raise community awareness on Climate Change adaptation were: community environmental festivals, educational debates and talks, presentation and exchange of literature, Internet, audiovisuals, application of master's degree thesis research results and 22.2% agreed on the need of more media products (T.V, radio, newspapers and radio bases) to learn more about Climate Change adaptation.

Most respondents (94.4%) considered the implementation of the Project extremely important as it will contribute to environmental culture, ecosystem conservation, as well as to raising community awareness and engagement on climate change adaptation and mitigation.

Likewise, 22.2% agreed on the importance of close coordination among community institutions, bodies and stakeholders to ensure the success of the Project; 16.7% proposed educating citizens to raise their environmental awareness. Mangrove planting and beach clean-ups were also recurrent suggestions by respondents, as well as engagement and commitment.

When asked about the risks Project implementation may entail, 52.6% of those interviewed didn't answer. However, 11.1% identified as Project risks the instability of actors and non-acceptance of the Project by some people; while 22.2% said they didn't perceive any Project-related risks.

Most respondents (83.3%) expressed their will to participate in the Project, actively and supporting all planned activities, while 16.6% said they didn't.

Respondents mentioned as grievances redress mechanisms for claims arising from negative Project impacts the Wildlife Biological Station, the local government, the President of the Council and the Project team, while acknowledged Popular Consultation as the mechanism to make the relevant claims. However, 38.8% said they weren't aware of any mechanisms.

The interview showed people were concerned and ignorant; but committed and willing to exchange views and receive training to take part in the Project. The pilot test of the Tool showed the need to emphasize key questions like those about project implementation-related risks, as well as existing grievances redress mechanisms for negative impacts of climate change and particularly those brought about by the Project itself.

The Focus Group technique was also applied to identify local actors/stakeholders, Institutions and informal and formal leaders that should become involved in the Project to ensure its successful implementation.

The Institutions they referred to were: La Coloma Fisheries Enterprise; the National Institute of Sports and Recreation; Culture; Education; Public Health; Wildlife; Communal Services; Trade; Coastguards; the National Institute of Water Resources (INRH); the National Revolutionary Police; the Committees for the Defense of the Revolution; the Cuban Women's Federation; the Youth Computers Clubs.

Informal leaders:

1. Ana "La Peluquera (the hairdresser)"
2. Milagros "La Peluquera"
3. Bárbara "La Peluquera"
4. Owner of "El Puerto" private coffee shop
5. Workers of the state-owned food production facility
6. Lázaro "Community Cultural Promoter"
7. Mirna "Project Joven Mar"
8. Representatives of Communal Services
9. Libia "Program Educate your Child"
10. Linares (Veterans Association)
11. Area Party Groups
12. Social workers
13. Representative of the Permaculture Project
14. Representatives of the Amateur Artists Movement

Formal leaders:

1. Wildlife
2. La Coloma Fisheries Enterprise
3. Elementary Schools
4. Grassroots Sports Movement
5. District delegates
6. Veterans Association
7. Coastguards
8. Mass Organizations (Committees for the Defense of the Revolution, Cuban Women's Federation)
9. Communal services
10. Ministry of the Interior
11. Social Workers
12. Culture
13. Youth Computers Clubs

Institutions and formal and informal leaders most frequently mentioned were: Education, Public Health; Culture; Mass Organizations; La Coloma Fisheries Enterprise; Self-employed workers; social workers.

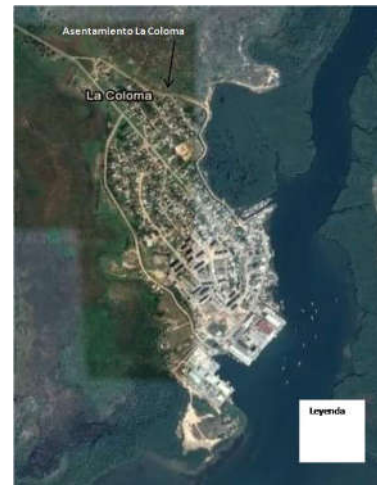
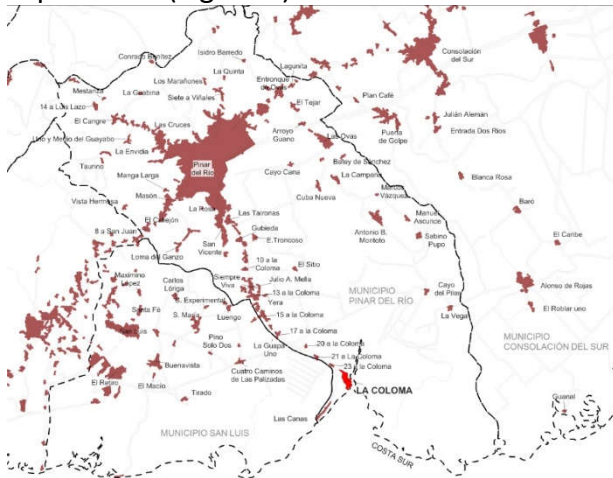
## Participatory Mapping

Participatory Mapping techniques were used to identify settlements that could benefit from the project (besides La Coloma), according to the views of social actors involved in the activity; as well as to identify existing Climate Change-related environmental problems in the community. (See Annex 2)

The participants were divided by affinity into four teams and each work team was given a printed Google Earth satellite image photo with the location of all the settlements of the Pinar del Río municipality, including neighboring municipalities San Luis and Consolación del Sur (Figure 7). They were asked to locate the settlements they thought could be benefitted by the project, either from coastal ecosystem rehabilitation actions (particularly mangrove planting and other ecosystem services), training activities, and workshops or from developed information or climactic products.

They took into account the existing socio-economic relations among La Coloma (second most densely populated settlement of the Pinar del Río municipality with approximately 2,000 inhabitants where industries of municipal, provincial and national importance are located, including EPICOL) and the other settlements of the municipality (employment, utility, infrastructures, recreational areas like beaches and vacation homes).

They were later given another satellite image, specifically of La Coloma, where actors identified and located existing Climate Change-related environmental problems affecting the community. To the lower right of the page a blank space was left for them to design their own legend, upon a brief explanation (Figure 8).



Figures 7 and 8: Printed satellite image photos handed out to local leaders to collect information.

Using Geographic Information Systems (GIS), the information collected from the maps created by each work team was repositioned, and FLACSO mapping specialists, drew up two summary maps, one with project beneficiary settlements (Figure 9) and another with existing environmental problems in the settlement (Figure 10); taking as primary information source the views of local leaders who took part in the activity.



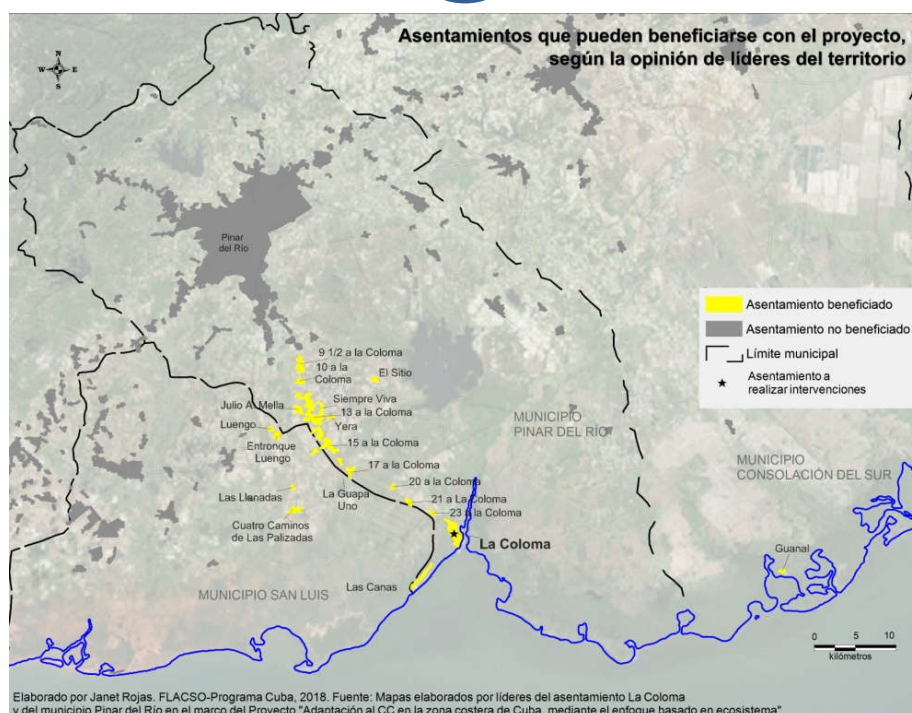


Figure 9: Map of settlements that could benefit from the project, according to the views of local leaders of La Coloma settlement, Pinar del Río municipality.

The four work teams concurred that besides La Coloma settlement, project actions will likewise benefit all rural villages and hamlets located from the north of the settlement (considering it is connected by road with the city of Pinar del Río) up to the Nueve y Medio town; and all the way down to the Las Canas hamlet located in the coast, to the southwest of La Coloma. It is worth noting that community actors even went on to identify beneficiary settlements outside of the Pinar del Río municipality, i.e. in neighboring municipalities like San Luis<sup>26</sup> (west) and Consolación del Sur<sup>27</sup> (east), which is highly relevant for the project as its area of action goes beyond existing municipal political and administrative limits.

Two of the four work teams identified rural town 15 as one of the most important to be benefitted with around 600 inhabitants; as *"there is well there that supplies fresh water to most people of neighboring settlements"*. They also mentioned direct benefits for hamlets 23 and 21, and Las Canas was mentioned again as *"they surrounded by mangrove and are the closest to us"*.

Subsequently, the Climate Change-related environmental problems identified in the settlement were: floods by tidal waves, floods by heavy rainfall, deforestation, mangrove felling, drainage channels to both sides of the settlement, sand mining, salinized soils, household wastes, poachers and EPICOL-related problems including waste dumping to the sea (waste waters, lobster shells, etc.) and CO<sup>2</sup> emissions to the atmosphere (Figure 10).

<sup>26</sup> Cuatro Camino de Las Palizadas, Las Llanadas, Entronque Luengo and Luengo.

<sup>27</sup> Guanál

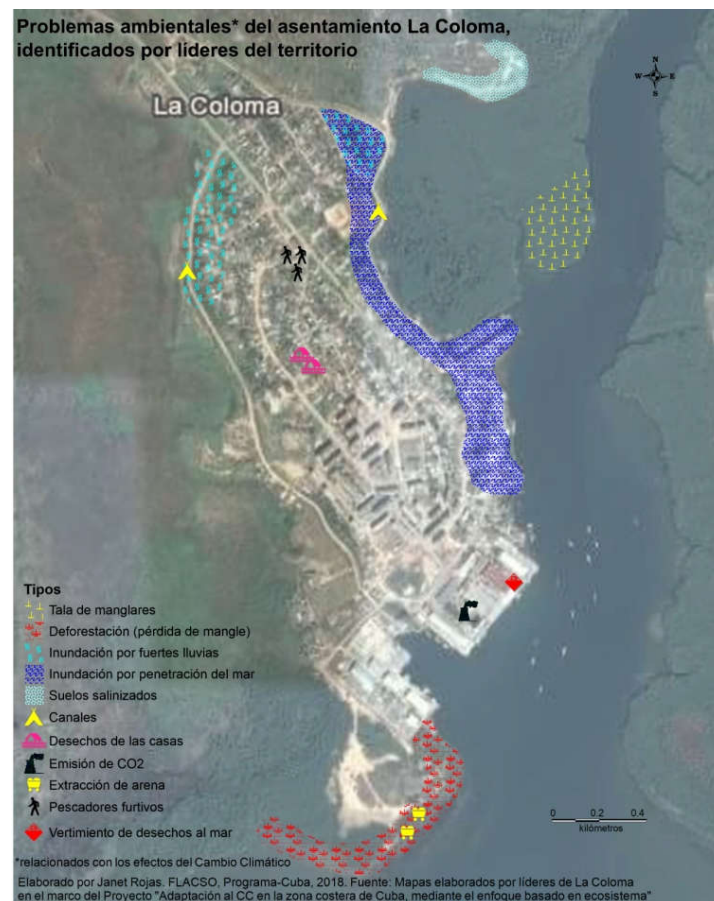


Figure 10: CC impact-related environmental problems in La Coloma settlement according to the views of local leaders.

Floods caused by tidal waves, was the main problem localized by more than half of participating actors, which corroborates the results obtained from the question of the observation guide on Climate Change impacts that affected them the most, where it was also the most frequently referred problem. Predictably, floods by tidal waves affect most of the coastal area of the settlement, while the northern part is affected both by floods caused by tidal waves and heavy rainfall.

Deforestation was the second most frequently identified problem, mainly linked to the loss of mangrove, hence participating actors themselves, proposed solutions like *"planting mangrove where it has been lost"*. They mainly localized this problem to the south of the settlement in a place known as La Playita, where they also identified sand mining as a cause of coastal ecosystem degradation. It should be noted that when referring to mangrove they also expressed concern with mangrove felling in rivers, which points to the need of considering different strategies for planned interventions by the relevant authorities.

The map where social actors identified settlements that could receive some benefits from the project could contribute to define its area of action in terms of the number of beneficiary individuals and entities in the territory. On the other hand, the environmental problems map could also contribute to determine intervention types and potential sites.

## Summary

All local actors convened took part in Public Consultation planned activities, which shows a high level of engagement, involvement and interest in the Project.

When asked whether Climate Change affected men and women alike, no gender difference perception was evinced, neither by the women nor the men interviewed.

Among the main climate change impacts that adversely affect them they identified, floods by tidal waves in the first place.

Respondents identified children as the most vulnerable group to climate change impacts.

The information products they considered more useful to raise community awareness on Climate Change adaptation were: community environmental festivals, educational debates and talks, presentation and exchange of literature, Internet, audiovisuals, application of master's degree thesis research.

The Institutions and formal and informal leaders most frequently mentioned were: Education; Public Health; Culture; Mass Organizations; La Coloma Fisheries Enterprise; Self-employed workers; and social workers.

During the Participatory Mapping experience, local actors concurred that besides La Coloma settlement, project actions will benefit all rural villages and hamlets located to the north of the settlement (considering it is connected by road to the city of Pinar del Río) up to the hamlet Nueve y Medio; and down to Las Canas hamlet located in the coast, southwest of La Coloma.

The main environmental problems identified by local actors were floods by tidal waves and deforestation.

## Annex 1: Tool used for local community consultation

The FLACSO-Cuba team is making the following interview in order to identify the perceptions, views and suggestions of local actors and population groups on climate change impacts in their communities. This is all part of the project “Ecosystem-based climate change adaptation in Cuba’s coastal and marine areas”, which shall be presented to the Green Climate Fund (GCF).

If some questions are not applicable to your case, please leave them unanswered, and move on to the next one.

We appreciate your cooperation.

Name:

Institution or organization you represent:

Title:

### Questionnaire:

1. Do you know what is Climate Change (CC) and its main impacts in Cuba?
2. What natural, physical, economic and social peculiarities identify this community?
3. What are the main climate change impacts that adversely affect you?
4. How could those CC impacts affect the life and development of the municipality? (impacts)
5. Why do those CC impacts affect you? (vulnerabilities)
6. Do you think Climate Change impacts men and women similarly? Why?
7. What individuals or groups are most vulnerable to CC impacts? Why?
8. Do you think that people that live closer to the sea are more vulnerable to CC impacts? Elaborate briefly.
9. Have steps been taken in your territory to reduce CC impacts? What steps? Have you been involved in them? How?
10. Are you aware of some local traditional practices that contribute to CC impact reduction? What are they?
11. What information products you consider more useful for people to gain awareness on Climate Change adaptation in this community?
12. Why do you think it important to implement the project “Ecosystem-based climate change adaptation in Cuba’s coastal and marine areas” in your territory?
13. What are your suggestions to ensure its successful implementation?
14. Assess potential risks that could result from Project implementation.
15. Would you like to participate? How?
16. If people thought they were adversely affected by some of the Project actions, where could they turn to? Are you aware of any existing grievances redress mechanism?
17. How have you felt throughout this interview? What question would you like to change or adjust to get the desired information?

**Annex 2: Worksheets developed by local actors during the Public Consultation process (implementation of the participatory mapping tool).**

Localice los tres principales problemas que usted considera, relacionados con el Cambio climático en el asentamiento Santa Cruz del Sur.





Localice los tres principales problemas que usted considera, relacionados con el Cambio climático en el asentamiento Santa Cruz del Sur.

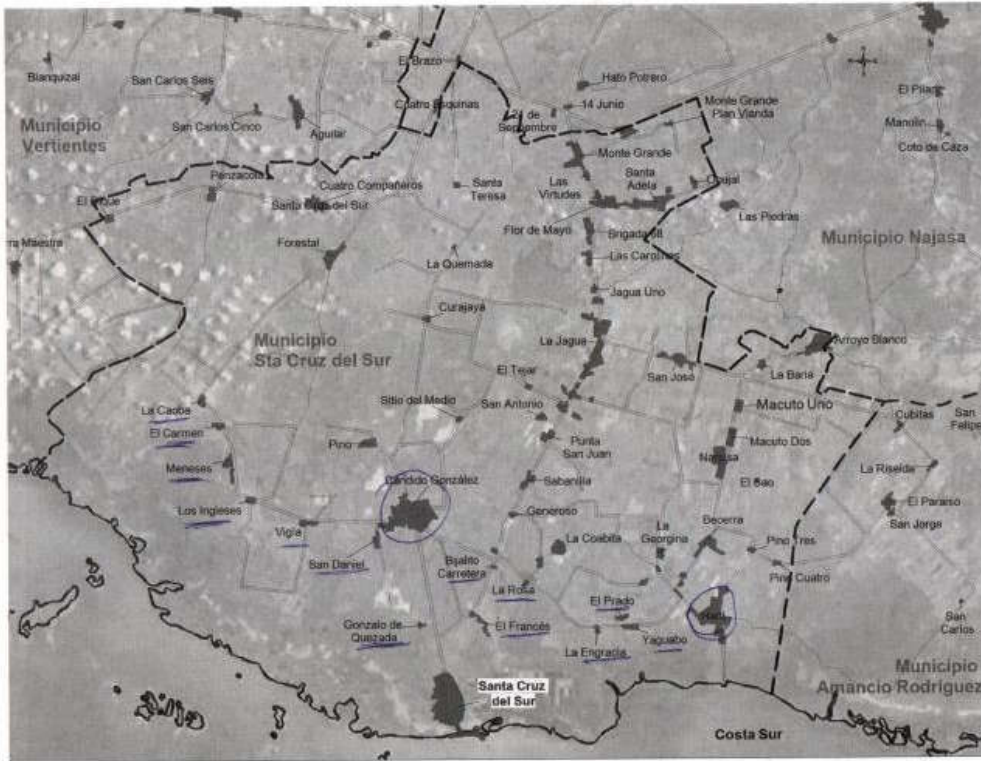


Elevación del nivel del mar.

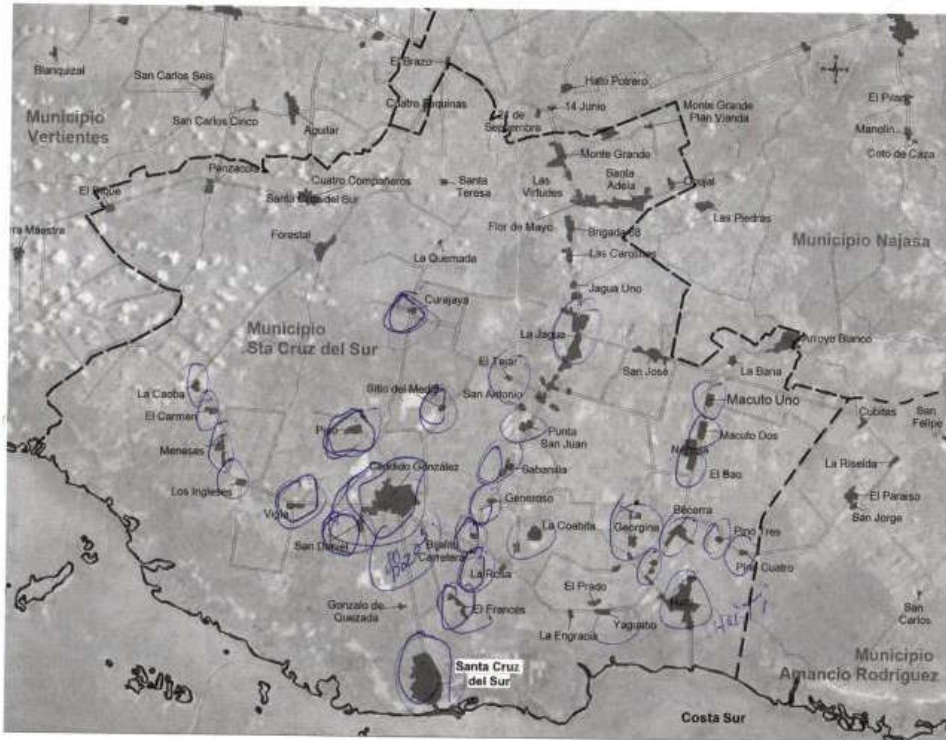
Inundaciones en las playas y costas.

Degradación de la zona costera.

*Identifique los asentamientos que usted considere que pudieran beneficiarse con el proyecto (además del asentamiento Sta. Cruz del Sur)*



Identifique los asentamientos que usted considera que podrían ser beneficiados con el proyecto (además del asentamiento Sta Cruz del Sur).



si se recargara el acuífero con el agua superficial del ambiente mediante canales y pozos de infiltración el volumen del acuífero subterráneo aumentaría y de paso se purificaría la cuña salina que esto afectando.



**Annex 3: Pictures of visits to intervention sites by and meetings of the Project team, stakeholders, actors and community leaders.**

