



PLANNING FOR CLIMATE ADAPTATION PROGRAM

Quarterly Report April to June 2016

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USAID/ICMA Planning for Climate Adaptation Program

USAID Quarterly Report

April – June 2016

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List of Acronyms

ADN	Ayuntamiento del Distrito Nacional (National District City Hall)
AMUPREV	USAID/ICMA Municipal Alliance for Prevention of Violence in Central America
APEDI	Association for Development of Santiago Incorporated
CAASD	Santo Domingo's Aqueducts and Sewage Corporation
Cámara TIC-RD	Chamber of Information technology businesses of the Dominican Republic
CATHALAC	Water Center for the Humid Tropics of Latin America and the Caribbean
CBO	Community-Based Organization
CCA	Climate Change Adaptation
CCNY	City College of New York
CDES	Santiago's Economic Development Council
CEUR	PUCMM Urban and Regional Studies Center
CLIMA	Ciudades Líderes en Iniciativas y Metas de Adaptación (Leader Cities in Adaption Initiatives and Goals)
CNCCMDL	National Council on Climate Change and Clean Development Mechanism
CODIA	Dominican School of Engineers, Architects and Surveyors
CORASAAN	Santiago's Potable Water and Sewage System Corporation
DGODT	General Directorate of Land Use Planning and Development
Fundación REDDOM	Foundation for Rural Economic Development Dominicana
G-12 ¹	National Network of Institutions for Land Use Planning
GIS	Geographic Information System
GIZ	German Agency for International Cooperation
GPS	Global Positioning System
INDRHI	National Institute for Hydraulic Resources

¹ G12: Group of organizations that influence land use planning processes in the Dominican Republic (Ministry of Tourism, Ministry of Health, Ministry of Public Works and Communications, Ministry of Environment and Natural Resources, Ministry of the Presidency, Ministry of Agriculture, National Housing Institute, National Institute for Hydraulic Resources, Ministry of Public Administration, Ministry of Police and Interior, Ministry of Treasury, Ministry of Energy and Mines, Ministry of External Relations, Cámara de Diputados, Dominican Federation of Municipalities and Municipal League. Source: MEPyD/DGODT/PNUMA/PNUD Municipal Land Use Planning Methodological Guide updated to include tools for Climate Vulnerability through the USAID/ICMA Climate Change Adaptation Program.

ICMA	International City/County Management Association
INAPA	National Institute of Potable Water and Sewage Systems
INTEC	Technological Institute of Santo Domingo
IT	Information Technology
FEDOMU	Dominican Federation of Municipalities
LGBT	Lesbian, Gay, Bisexual and Transgender
LUP	Land Use Planning
MEPyD	Ministry of Economy, Planning and Development
MINERD	Ministry of Education
MITUR	Ministry of Tourism
MOPC	Ministry of Public Works and Communications
NGO	Non-governmental Organization
NCCCCDM	Dominican Republic's National Council for Climate Change and the Clean Development Mechanism
NOAH	Neighborhood of Affordable Housing Inc.
ODETCA	Land Use Planning and Sustainable Development in Central America and the Dominican Republic Project/SISCA
ONAMET	National Meteorological Office
ONESVIE	National Seismic and Infrastructure Vulnerability Evaluation Office
PES	Santiago's Strategic Plan
PMD	Municipal Development Plan
PMOT	Municipal Land Use Plan
PMP	Performance Monitoring Plan
PUCMM	Pontifical University Mother and Teacher
RAUDO	National Network of Universities for the Environment
SPM	San Pedro de Macorís
TNC-CC	Third National Communication on Climate Change
UNFCCC	United Nations Framework Convention on Climate Change
UNDP	United Nations Development Program
USFS	United States Forest Service
VAT	Value Added Tax

Executive Summary – April-June, 2016

During the April-June Quarter the USAID/ICMA Planning for Climate Adaptation Program successfully presented the vulnerability assessment results to each municipality. These assessments mark a milestone in the project as they provide the information necessary to incorporate climate change impacts into the territorial diagnostic (Stage 2 of the PMOT process). The draft results were presented by ICMA and ICF to Working Group members in each municipality, in order to validate the assessment findings and conclusions with local stakeholders.

In early April, delegations from Santiago and San Pedro de Macoris visited Dubuque, Iowa, and Fort Lauderdale, Florida, respectively. Each delegation was accompanied by Program staff and included city officials, Dominican Federation of Municipalities (FEDOMU) staff and representatives of the city's development council. During these visits, the Dominican delegations had the opportunity to learn about their US counterpart's climate change and sustainability action plans. The visits served to identify areas in which the Dominican cities would like to receive technical assistance from the respective US city. Based on their discussions and exchange of experiences, each pair of cities (Santiago/Dubuque, San Pedro de Macoris/Fort Lauderdale) will develop a schedule of activities for the following months.

Also during this reporting period, USAID/ICMA Planning for Climate Adaptation Program initiated the process for selecting the projects that will be supported through our small grants program. The goal of the small grants program is to increase community participation in adaptation by supporting local community-based organizations (CBOs). The selection process consists of two stages in between which there is a capacity building activity. The first stage includes the selection of project ideas, presented on a simple project profile format, followed by a capacity building workshop on project preparation. The second stage consists of the presentation of complete proposals. The call for project profiles was issued in April by publication in national newspapers and on FEDOMU's website. Ten (10) profiles were received by the May 5th deadline. A selection committee, comprised of representatives from FEDOMU, Santiago's Economic Development Council (CDES), USAID, Foundation for Rural Economic Development Dominicana (REDDOM) and ICMA, reviewed the profiles and selected eight (8) to move into the next phase of the selection process. The project preparation workshop was held on May 22nd. Final proposals are due July 15th. We expect to fund six (6) small projects from this round of proposals.

The Program continues to build national capacity in land use planning and climate change adaptation. Training activities during the April-June quarter included a four-day training of trainers on land use planning using DGODT's PMOT Guide. ICF facilitated a two-day training of trainers on Adaptation Planning and Adaptive Management. Both trainings were targeted mainly to FEDOMU and the General Directorate of Land Use Planning and Development (DGODT) staff, as these institutions are expected to replicate similar processes in other municipalities.

In general, the USAID/ICMA Planning for Climate Adaptation Program's activities advanced as planned during the April-June period. Municipal technical team meetings were held as scheduled and work on the territorial diagnostic proceeded as planned. Technical team meetings scheduled for next quarter will complete the second stage of the Municipal Territorial Planning (PMOT) process. Since three out of four of our target municipalities will have new governments as a result of the national and municipal elections held on May 16th, we expect to make adjustments to the implementation schedule for the following two quarters.

I. Program Highlights for the Quarter

- Conducted exchange visit to Dubuque, Iowa with the participation of a group of municipal planning and climate change specialists from Santiago Municipality, CDES, FEDOMU and ICMA staff
- Conducted exchange visit to Fort Lauderdale, Florida with the participation of a group of municipal planning and climate change specialists from San Pedro de Macorís Municipality, the San Pedro Socio-Economic Council, FEDOMU and ICMA staff
- Launched small grants process and completed the first stage in the selection process.
- Presented vulnerability assessment results in each municipality, in coordination with ICF International.
- Conducted trainings on the use of the Municipal Urban Planning Guide of the Dominican Republic in coordination with DGODT and the United Nations Development Funds (UNDP).
- Conducted training of trainers on Adaptation Planning and Adaptive management.
- Resource partner ATKINS presented Future Proofing City’s tool and scorecard for Las Terrenas.
- Completed municipal context documents for each municipality. Conducted Working groups meetings in National District, San Pedro and Las Terrenas to advance the territorial diagnostics.

II. Major Accomplishments/Progress towards Results by Component

II.1 Component 1: Improve the Technical and Management Capacity of Municipal Planners

Program activities under this component strengthen the capacity of municipal staff and other key stakeholders to include climate change adaptation in municipal planning processes and decision making.

Assess the Capacity and Needs of the Target Municipality

Program staff continued working with FEDOMU’s technical coordinators and municipal staff to establish baseline climate change and land use planning technical capacity in each target municipality. During this reporting period, a second draft of the capacity assessments document was completed and validated by the municipal technical teams. The main findings can be summarized as follows.

Strengths:

- Knowledge of Law 176-07, which established the legal framework for municipal governments in the Dominican Republic.
- Knowledge of the areas and groups of people most vulnerable to natural disasters.

- Acknowledgement that City Hall is the institution responsible for land use planning at the local level.
- Basic understanding of climate change and how it affects the municipality.
- Belief that the climate is changing.

Areas for improvement:

- Lack of familiarization with the risk management law and participation in the preparation of the Municipal Development Plan (PMD).
- Lack of knowledge in climate change and land use planning legal frameworks
- Low technical capacities related to developing and implementing climate change vulnerability assessments and adaptation planning, land use planning, GIS, participatory processes, among others.

Municipal staff perceive that the main challenges or obstacles preventing the application of knowledge and abilities are:

- Lack of economic and human resources
- Lack of facilities

Because of the election's results, we expect to be working with mostly new technical teams in at least three of the four municipalities: Las Terrenas, Santiago and the National District. Therefore, baseline information will need to be collected again for these municipalities.

Technical Team Meetings

Technical teams' meetings occur once a month on average. The technical teams (members from the municipality, FEDOMU and ICMA) meet to prepare for the working group workshops and later, to incorporate the workshop results into the different elements of the land-use plan at each stage. The technical teams are a space for dialogue where key initiatives are identified to strengthen inter-institutional relationships at the local government level.

During the April-June Quarter, Program staff worked with the technical teams in each municipality to advance in Stage 2 of the PMOT process (territorial diagnostic). During this quarter, several technical team meetings took place where Erick Dorrejo, Municipal Planning Specialist, led the technical teams in discussions and team exercises to complete each municipal context document. As indicated in previous reports, an assessment of the municipality cannot be separated from the territories that surround it and which influence its development. For this reason, the municipal context must be mapped out to consider all the relationships and impacts of environmental, social, spatial and cultural dynamics of the nearby territories which influence and condition municipal development; whether at the local, regional, or national level.

Drafting the municipal context. Program staff has developed a methodology for implementing the guidelines set out by DGODT's PMOT Guide, to facilitate the identification and mapping of the municipal context by the working groups through answering the following questions: (1) What are the bordering political-administrative units? (2) Which provinces, municipalities, human settlement and/or cities do you

share similar history/culture with? (3) Identify elements of the natural environment located in the surrounding territories and linked to the municipality. (4) What are the ways to access the municipality? (5) What is the surrounding infrastructure influencing the municipality? (Potable water and sewage system, Roadways and transportation -ports, airports-, Energy, Solid waste disposal sites, Supply (markets, supply centers), Education/health, Recreation centers); (6) What are the human settlements and/or cities with which the municipality has social, commercial and/or service relationships? (7) Where are migration flows headed to and from? What motivates the flows? (employment, housing, leisure, education). (8) What are the activities or situations of natural or human origin, which are found in your surroundings which influence the municipal territory's vulnerability?

The way the process is being conducted allows for hands-on training of municipal and FEDOMU staff, as the whole technical team is involved in researching, analyzing and drafting the answers for each of the questions. A full description of the municipal context for each target municipality has been drafted and will be included in the Territorial Diagnostic report, which will be completed by the end of the following quarter. A two-page summary of the municipal context analysis for each municipality (please see Annex B) was distributed to the participants in the working groups meetings (see section II.2) to serve as input for the territorial diagnostic exercise conducted by the working groups.

The technical team meetings during this reporting period were held as follows:

- National District: April 12th, May 3rd and May 18th
- Santiago: April 18th, May 5th and May 20th
- San Pedro de Macorís: May 19th
- Las Terrenas: May 24th

Trainings

The program continues to work on improving institutional capacity to incorporate climate change considerations and information into decision making and planning processes. During this reporting period, the program facilitated trainings on land use planning and adaptation planning.

Municipal Land Use Planning using DGODT's Guide:

- A two-day workshop was held on April 21st and 22nd for representatives from the national government institutions that form the G-12 (a group of nineteen institutions convened by DGODT to promote consensus in the formulation of the national land use plan). The workshop agenda included discussions on how to incorporate climate change adaptation, disaster risk prevention, gender and human development into land use planning. The participants gained an understanding of how to use the DGODT PMOT Guide and its tool box. The activity also included a panel presenting municipal land use planning experiences in the DR, in which ICMA presented the lessons learned in the Program process so far. With this activity, the Program initiated a dialogue with the national level institutions that will be key for the implementation of the municipal land use plans. This is a critical element for the sustainability of project results, since most investment and decisions affecting the municipal territories in the DR are made by national government institutions. This training workshop was organized in collaboration with DGODT and in his closing remarks, Mr. Franklin Labour, Director of the DGODT, talked about the DR's focus on land use and development planning as the country prepares to participate in Habitat III (the UN

conference on Housing and Sustainable Urban Development to be held in Quito in October of this year).

- A four-day training of trainers on the use of the PMOT Guide was conducted April 26-29. Opening remarks to this training were offered by Franklin Labour, DGODT Director; Ron Savage, USAID/DR Climate Change Chief; and Isabelle Bully-Omictin, ICMA Latin America and Caribbean Programs Director. Each of them highlighted the importance of having methodological tools that will facilitate a standardized approach to municipal land use planning, while facilitating the incorporation of cross cutting issues such as gender, climate adaptation and risk management. Participants in this training included staff from DGODT, FEDOMU, and the target municipalities. A total of 36 people (56% women) were trained, including Program staff. The training presented the different topics through a combination of presentations and group exercises. The agenda also included panels to present different experiences, both national and international. The topics covered in the training included the following:
 1. Land development, land use and management.
 2. Potential connections among land use planning and other critical national development topics for the Dominican Republic.
 3. Instruments and processes involved in municipal land use planning.
 4. Methodology to elaborate a PMOT using the DGODT Methodological Guide.
 5. How to face critical decision moments during the territorial planning process.

Climate Change Adaptation

Implementing Partner ICF International experts Joanne Potter and Manager Angela Wong prepared and conducted a Training of Trainers (TOT) workshop from May 31st to June 1st on Climate Adaptation Planning and Adaptive Management. The material used for this training will be compiled into a training manual that will serve to support program staff and train municipal staff in facilitating adaptation planning exercises in the target municipalities.

The training objectives of the TOT on Adaptation Planning focused on advancing the understanding of climate change adaptation and adaptive management, and their application to land use planning. The TOT was aimed at helping participants develop a common understanding of related concepts and raising awareness of the value of implementing a portfolio of adaptation options in order to increase resilience. Participants learned how to identify, evaluate and select a range of adaptation options to address key vulnerabilities. The training also helped participants to develop training capabilities by role play and facilitation of small groups exercises. FEDOMU and ICMA staff participated in the training.

ATKINS' Future Proofing Cities tool

Resource partner ATKINS presented its Future Proofing Cities tool to a group of university professors, researchers and technical personnel from key institutions at the national level, such as ONAMET. The activity was organized at INTEC with support from the USAID/INTEC Climate Information Program. With the attendance of close to 40 people, the event served to highlight how economic and physical modeling tools can be integrated with geographic information systems to support decision-making on a territorial basis. ATKINS explained that "The Future Proofing Cities (FPC) Simulation Tool is a map-

based tool used to evaluate a city's resilience to climate change and its effects. The tool simulates city growth over a planning time horizon, typically from the present day until 2050. Users of the tool can create master plan scenarios that include planned changes to the city in terms of policy and planning, infrastructure improvement, and physical counter measures to climate change effects." The company plans to have the tool available on -line by the end of the year. They used the information gathered for Las Terrenas as part of the vulnerability assessment to show how the tool can be applied to a specific area.

Training and Knowledge Exchange

Exchange visit from Santiago to Dubuque, IA. During the first week in April, six (6) people representing the Santiago Municipality, CDES, FEDOMU and ICMA traveled to Dubuque, Iowa to meet with city officials for an exchange of experiences in climate change adapted land use planning processes. Mr. Reynaldo Peguero, Director of the Santiago's Strategic Plan, wrote an article immediately upon return to the city of Santiago expressing the 'authentic strategic learning experience' the team was able to obtain from their colleagues in Dubuque. The article was distributed to the mailing list of Santiago's strategic plan (PES), and published in several printed and digital media, including the following:

- <http://acento.com.do/2016/opinion/8340157-autenticas-enseanzas-estrategicas-dubuque-iowa/>
- <http://www.lainformacion.com.do/modulos/print.php?sec=2&op=1&idReg=7249>
- <http://plural.do/autenticas-enseanzas-estrategicas-de-dubuque-iowa/>

Mr. Peguero begins his article mentioning how they maximized their trip and indicates that "the United States Government, through USAID, made a great effort in putting Santiago in open and educational contact with Dubuque's brilliant intellectuals of governability, watershed planning and management of natural, potable, residual and waste water." They also learned about the implementation of control measures and risk management when exposed to major climate related events. Participants in the exchange agreed that it was a very productive week where the Dubuque delegation shared its experience in effective local governance that engages the private sector and civil society. The complete trip report for the Dubuque exchange can be found in Annex C.

USAID/ICMA Planning for Climate Adaptation participants:

1. Rosa Arlene Maria, Director of the Northern Cibao Association of Municipalities, ASOMURECIN
2. Hipólito Gomez, Santiago's Municipal Director of Urban Planning
3. Marcos Gomez, Santiago's Municipal Director of Land Use Planning
4. Reynaldo Peguero, Director of Santiago's Strategic Development Plan
5. Yamilkis Flores, FEDOMU Manager
6. Erick Dorrejo, ICMA RD Municipal Planning Specialist
7. Catalina Gutierrez, ICMA Washington, Assistant Program Manager

Representatives from the City of Dubuque, IA:

8. Roy D. Boul, Dubuque City Mayor
9. Michael Van Milligen, Dubuque City Manager
10. Cindy Steinhauser, Assistant City Manager
11. Cori Burbach, Sustainability Coordinator
12. Denise Ihrig, Environmental Engineer
13. Laura Carstent, Strategic Planning Manager

14. Mary Rose Corrigan, Urban Public Health Specialist
15. Head officers from the Fire Department, civil defense, 911 emergency system, water management, streets supervisor, museum management, , among others.

Following the visit, the City of Dubuque and the City of Santiago have been developing a work plan for the technical activities that Dubuque staff will support in the following months. The finalization of that plan will need to wait until the new authorities take office on August 16th. It is expected that the most immediate activity will be a technical visit from Dubuque tentatively scheduled for early to mid-September.

Exchange visit from San Pedro de Macorís to Fort Lauderdale, FL. During the second week in April, 9 people representing the San Pedro de Macorís Municipality, FEDOMU and ICMA traveled to Fort Lauderdale, Florida to meet with city officials for an exchange of experiences in climate resilient and sustainable city management.

Field trips included visits to a beach nourishment project, the South Florida Water Management District, a waste to energy plant named the Wheelabrator and an airboat tour of the Florida Everglades. Key Ft. Lauderdale staff presented on climate change adaptation, citizen participation, land use planning adapted to climate change, collaboration among local municipalities, sustainable development, zoning and comprehensive planning, code enforcement and building permitting processes, water control, storm water engineering, GIS for vulnerability assessments and more. The mayor of Ft. Lauderdale, John P. Seiler, handed the keys of the City to Nelly Pilier, Vice Mayor of San Pedro de Macorís. The exchange supported local capacity-building of staff and officials from San Pedro de Macorís to increase the resilience of their municipality and promote improved urban planning and land use management that is adapted to climate change.

As a result of the visit, both teams are working on a schedule of technical activities for the following months. That work plan has been delayed on the Dominican side by the elections (the mayor of San Pedro ran for re-election and won), but we expect to have the work plan ready by early August. The draft trip report for the Fort Lauderdale exchange can also be found in Annex C.

USAID/ICMA Planning for Climate Adaptation participants:

1. Ramón Antonio Echavarría, Mayor
2. José Antonio Frías, General Secretary
3. Richard Miller Guillen, Director of the Office of Municipal Urban Planning
4. Nelly Pilier de Stapleton, Vice Mayor
5. Danilo Miñoso Díaz, President of the Municipal and Social Council and President of the Chamber of Commerce and Production of San Pedro de Macorís
6. Miriel Ainanna Mañe de los Santos, Regional Coordinator (of the San Pedro de Macorís Region) of FEDOMU
7. Beatriz Alcantara Colon, Territorial and Environmental Management Director at FEDOMU
8. Alejandro Herrera Moreno, Climate Change Specialist, ICMA RD
9. Andrea Vogel, Technical Coordinator, ICMA RD

Representatives from Fort Lauderdale, FL:

1. John P. Seiler, Mayor

2. Lee Feldman, City Manager
3. Christopher Lagerbloom, Assistant City Manager
4. Paul Berg, Acting Public Works Director
5. Nancy Gassman, Assistant Public Works Director
6. Paula Rama, Acting Structural Innovation Manager
7. Todd Hiteshew, Environmental Services Manager
8. Linda Mia Franco, Urban Design- Principal Planner
9. Samantha Sanchuck, Assistant Director of Environmental Protection and Growth Management Department
10. Randall Robinson, Urban Design- Planner III
11. Elia Parker, Urban Design and Development Manager
12. Anthony Gregory Fajardo, Zoning Administrator
13. Sharon Ragoonan, Community Inspections Manager
14. Joe Pasquariella, Structural Plans Examiner
15. Annalise Mannix- Senior Project Manager-Engineering
16. Elkin Diaz- Senior Project Manager- Engineering
17. Glen Hadwen- Sustainability Manager
18. David Rubin- GIS Analyst
19. Alfred Battle Jr.- Deputy Director, Sustainable Development

II.2 Component 2: Incorporate Climate Change Adaptation Considerations into the Municipal Planning Process

Working Group Meetings

Working groups are the main participatory mechanism established by the program to facilitate stakeholders' involvement in the land-use planning process. The members of the working groups are people and organizations identified as key stakeholders by the technical teams. Working group meetings are scheduled once per quarter, on average, although each territory has its own dynamics. During this reporting period, working group meetings were generally dedicated to advancing the characterization of the municipal context. The main climate change priorities (direct or indirectly related) of each territory were identified and prioritized during this reporting period. The groups identified specific number of people and places affected by climate change in each territory.

In three of the Program's target municipalities working groups met to complete the second part of Stage 2 in the PMOT process. During the previous quarters, the working group meetings were dedicated to identifying and analyzing the municipal context. This quarter and next will be dedicated to completing the territorial diagnostic. Working group meetings were held in National District, Las Terrenas and San Pedro de Macorís. The meeting in Santiago is scheduled for July 2nd.

These working group meetings had the following agenda:

- Presentation of the municipal context.
- Presentation of vulnerability assessment results.
- Municipal diagnostic: Group exercise to identify and prioritize the key issues within the municipality as perceived by the working group members.

Dates and number of participants for each meeting are as follows:

- a. **National District:** Thursday, June 9th, 33 people (60% female).
- b. **Las Terrenas:** Tuesday, June 14th, 25 people (60% female). During this meeting representatives from resource partner ATKINS presented their “Future Proofing Cities” tool and its relationship to the climate change vulnerability study.
- c. **San Pedro de Macoris:** Thursday, June 23rd, 23 people (65% female).

The results from the working groups will be incorporated into the territorial diagnostics by the technical teams. We expect to complete a draft report with the results of Stage 2 for each municipality by the end of next quarter.

Climate Vulnerability Assessments

Between April 18 and 21st, ICF International and ICMA presented to the municipal technical teams and selected members of the working groups, the results from the climate vulnerability assessments. Joanne Potter and Molly Hellmuth from ICF were in charge of presenting the main results of the climate vulnerability assessments for each municipality. The goal of these presentations was to validate findings and to identify any additional information that escaped the formulation process. Furthermore, the group opened discussions with key municipal staff in each municipality to provide their feedback and begin to brainstorm possible climate change adaptation measures. Once the presentations were completed, a period was opened to receive additional comments and feedback. In the following weeks, Alejandro Herrera met with each municipal team to discuss and get feedback and inputs to the assessment draft document, which was sent to them in Spanish.

The results of the vulnerability assessments show that the four municipalities face some common threats:

- densely populated informal communities (vulnerable to flooding, landslides)
- municipal services (roads, electricity, etc) vulnerable to flooding and temperature increases,
- water security (Santiago and National District), vulnerability to drought, rainfall reductions and temperature increases

There are also some key distinctions related to the type of flooding, the degree of dependence of municipalities on natural resources, the vulnerability to coastal erosion, as well as marked differences in municipal resources and capacity.

Table 1 summarizes key vulnerabilities identified for each target municipality:

Municipality	Key vulnerabilities	Description
National District	Flooding of densely populated informal communities	• Increased intensity of storms, and higher sea levels and storm surge heights • Densely populated, poor constructions, low access to services, low financial resources • Damage to housing, assets, potential loss of life, particularly in low-lying areas of the Isabela and Ozama river basin
	Flooding of critical municipal services	• Important infrastructure located in low-lying areas, drainage areas of the Ozama and Isabela Rivers

Municipality	Key vulnerabilities	Description
		- Flooding from heavy rainfall, high winds, salinization, landslides; more intense flooding due to heavy rainfall and more storms, sea level rise and storm surge - Aging, poorly constructed infrastructure - Direct damage to infrastructure and impacts on the economy
	Water security due to drought, extremes, salinization	- Haina and Isabella River Intakes (variable flow), Valdesia dam (reduced inflow), groundwater (salinization) - Frequent drought, projected decreases in rainfall and increases in temperatures, sea level rise - Population growth, watershed degradation, electricity shortages - Reduced availability and quality of water; increased demand; salt water intrusion; damage to water distribution network
Santiago	Flooding and landslides of informal settlements	- Informal settlements in flood plain, or on steeper slopes - Flooding of the Yaque del Norte River, landslides as a result of intense rainfall; projected increased rainfall intensity of storms - Poorly constructed dwellings, weak watershed management, low service access, low financial resources; poor flood risk management - Damage to assets, potential loss of life
	Water supply shortages due to drought	- Bao- Tavera Reservoirs (drought) - Projected increases in temperatures, reductions in average annual rainfall - Population growth and watershed degradation - Water shortages and rationing, hydropower reduction
	Climate stressors on Municipal Services	- Flooding of the Yaque del Norte River, landslides as a result of intense rainfall; high winds - Projected increased rainfall and intensity of storms - Aging infrastructure, poor flood risk management, watershed degradation - Direct damage to infrastructure, disruption of services, and impacts to the economy
Las Terrenas	Flooding of urban zone	- Low-lying, proximity to the coast and Las Terrenas River - Projected increased storm intensity, higher sea levels and storm surge heights - High concentration of assets and people, low access to services, poor solid waste management - Damage to infrastructure, and natural resources; potential loss of life
	Added stressors to tourism and natural	Beaches, coral reefs, fisheries, tourism infrastructure vulnerable to coastal and riverine flooding, high temperatures

Municipality	Key vulnerabilities	Description
	resources-based livelihoods and economy	• Projected increases in coastal and riverine flooding; temperature increases • Natural resource-based; multiple non-climate stressors (i.e., pollutant runoff, mangrove removal, sand mining) • Damage to tourism infrastructure; added stress on natural resources (e.g., reefs); loss of livelihoods
	Climate stressors on municipal services	• Low-lying, proximity to the coast and Las Terrenas River, floods and winds from intense rainfall • Projected increased storm intensity, higher sea levels and storm surge heights • Aging and/or poorly constructed infrastructure, low access to resources, destruction of natural beach protections, development that exacerbates erosion, solid waste blocking drainage • Disruptions to emergency services, direct damage to infrastructure, and impacts to the economy
San Pedro de Macorís	Flooding of urban economic zone	• Low lying elevation, proximity to the Sea, Higuamo and Soco Rivers • Projected increased intensity of storms, higher sea levels and storm surge heights • Unplanned growth, poor structural design, lack of drainage, deforestation, low access to services and resources • Direct damage to communities along the floodplain, assets, business, services, economy
	Well-being and security of impoverished communities	• Floods from intense rainfall, high winds, in Higuamo River floodplain • Projected increased intensity of extreme events, high temperatures, sea level rise • High concentration of poor populations and informal settlements; livelihoods dependent on natural resource-based sectors; high percentage of people with disabilities • Direct damage to communities, infrastructure, and natural resources; potential loss of life
	Damages and disruptions to natural resources vital for the economy	• Agriculture, livestock, tourism, beaches, reefs, and fishing impacted by flooding, high temperatures, sedimentation • Projected increased intensity of extreme events, temperature, sea level rise, reductions in rainfall • Pollution, landscape degradation, over-fishing • Direct damages to natural resources- destruction, reduction in quality

The climate vulnerability assessment process helped build awareness and understanding of climate change impacts among municipal stakeholders, as well as of the relationship between climate and non-climate

stressors. The results from the assessments will be incorporated into the land use planning process as a main input in territorial diagnostic for each municipality, facilitating the integration of climate considerations into decisions. The assessments will also serve as the basis to identify and prioritize adaptation measures. The Program's climate change specialist, Dr. Alejandro Herrera, is working on a systematization of the vulnerability assessment process, which will serve as a guidance document to be used in future trainings and that will enrich the vulnerability assessment tool in the DGODT PMOT toolbox.

Formalization and Strengthening of Public Participation in the Planning Process

During this quarter, the program has begun implementing its strategy to approach community organizations and promote their engagement to increase resiliency. A series of community workshops parallel to the working groups process has begun in each municipality. These workshops serve to socialize and validate the vulnerability assessment results and obtain feedback from the community on draft chapters of the land-use plans at each stage of the process. The Program's Citizen Participation Specialist, Andres Cepeda, coordinates these meetings with each municipality and support from FEDOMU's technical coordinators.

The series of community meetings started in late June to avoid political activism during the pre/post electoral process. The first meetings of this series was held in National District's ward 3 on June 28th at the Comité para la Defensa de los Derechos Barriales (COPADEBA) where 40 people (71% women) attended. The second meeting with National District's ward 3 community organizations was held on June 30th at the Estación de Transferencia de Residuos Sólidos in Villas Agrícolas, where 24 people (42% women) attended. Meetings are planned for the other National District wards, as well as for the other municipalities throughout next quarter until late August.

After this series has been completed, the program will continue to meet with communities with a focus on the identification of land use/adaptation measures at the neighborhood level. By the end of the calendar year, communities will be better prepared to present adaptation projects to the municipalities that can be considered for participatory budget support or to request specific zoning regulations from the municipal council.

Small Grants program to promote citizen participation

The small grants call for applications was published in April in national newspapers and FEDOMU's website. The goal of the small grants is to increase community participation in climate change adaptation municipal planning processes through support to CBOs. The selection process consists of two stages in between which there is a capacity building activity. The first stage includes the selection of project ideas, presented on a simple project profile format, followed by a capacity- building workshop on project preparation. The second stage consists of the presentation of complete proposals.

Ten (10) applications (expressions of interest) were received by the May 5th deadline. A selection committee, comprised of representatives from FEDOMU, CDES, USAID, REDDOM and ICMA, reviewed the profiles and selected eight (8) to move into the next phase of the selection process. Final proposals are due July 15th. We expect to fund six (6) small projects from this round of proposals.

In between the first and second stages of the selection process, on June 22nd, from 8:30 a.m. to 4:00 p.m., ICMA staff conducted a workshop. Eleven (11) people from six (6) organizations from the four (4) targeted municipalities participated in this event:

- a. Asociación Tecnológica de Investigación y Desarrollo Empresarial - ATIDE, Inc. (National District, Ward 2)
- b. Instituto Geográfico (UASD, National District)
- c. Centro Integral para el Desarrollo Local, CIDEL, (Santiago)
- d. Fundación DAMIDI (San Pedro de Macorís)
- e. Russa Garcia y Asoc. (Las Terrenas)
- f. Fundación Héroes del Medio Ambiente (Las Terrenas)

During the workshop, ICMA staff presented the Planning for Climate Adaptation goals and initiatives. Program Director, Indhira De Jesús, spoke of the importance of the grants process to motivate creative processes in the involvement of community members. Component leaders presented the Program's Land Use Planning, Climate Change and Citizen Participation context and achievements to date. Finance Specialist, Laura Mejía, explained the administrative and financial procedures and requirements to follow USAID regulations during the grants process. Alejandro Herrera made a presentation focused on how the proposed projects should focus on addressing municipal climate vulnerabilities. Community Participation Specialist Andrés Cepeda and Laura Mejía detailed the specifics and expectations for completing the proposal stage (situation, project description, methodology, evaluation, citizen participation and sustainability, gender and inclusion and budget). July 15th was established as the final deadline to receive the full proposals for small grants.

Engaging the Private Sector and Civil Society

I2UD Private Sector and Civil Society Dialogue Initiatives

Through ICMA's engagement with resource partner, the Institute for International Urban Development (I2UD), the Program organized a series of workshops in Santiago and the National District to promote private sector and civil society involvement in climate change adaptation and raise awareness of the impact of climate change on their interests.

Thanks to the collaboration of I2UD, the Program invited two representatives from the ClimateCARE Program of Neighborhood of Affordable Housing Inc. (NOAH), Chris Marchi, Director of Community Building and Environment and Magdalena Ayed, Community Organizer. NOAH is an East Boston-based community development corporation, which works with residents and communities to promote affordable housing strategies, environmental justice, community planning, leadership development, and economic development opportunities. ClimateCARE (Climate Community Action for Resilience through Engagement) is a program that encourages people to take action to increase their community's climate resilience. NOAH built a coalition with city and key agency stakeholders to support environmental change efforts in East Boston and educate them on climate resilience. Thanks to a three-year grant from the Kresge Foundation, NOAH is continuing its efforts to promote the ClimateCARE Program and will continue to strengthen community engagement; partner with the City of Boston to advance its Climate Action Plan; and bring together agency stakeholders in an Adaptation Planning Working Group which will facilitate coordinated, actionable climate resilience plans.

Also with assistance from I2UD, the Program invited Amy Longworth, Director of the Boston Green Ribbon Commission (GRC), to participate in the workshops. The Boston Green Ribbon Commission is a multistakeholder platform, which includes a voluntary group of 34 top leaders in various sectors including government, utilities, clean energy, health care, commercial real estate and higher education. The Mayor of Boston, the Secretary of Massachusetts Energy and Environment, business CEOs, heads of universities and hospitals, philanthropists and NGO leaders all participate in the Commission. The Commission has three main objectives: 1) advise the City on the implementation of its Climate Action Plan; 2) Engage sector leadership in aligning their assets and initiatives to support the plan outcomes and 3) Lead, by practicing and promoting best practice examples within and across sectors that advance the Climate Action Plan goals.

Accompanying the NOAH and Boston GRC on the visit to the DR was Oriol Montfort from I2UD. Mr. Montfort accompanied the delegation as part of I2UD's scope of work to help the Project identify opportunities to involve the private sector. He assisted with the design of the workshops for building awareness of climate change adaptation and support for replication of successful practices by the private sector. Upon his initial trip to the Dominican Republic in 2015, Mr. Oriol Montfort presented the Boston Green Ribbon Commission as an initiative which could be replicated in the Dominican Republic, particularly in the cities of Santiago and the National District. Prior to the workshops, the Program's Technical Coordinator, Andrea Vogel, met with 15 different entities of the private sector and civil society to invite them to the workshops and to commence a dialogue on possible collaboration with the Program.

Santiago Workshop: Promoting Social Responsibility facing Climate Change Adaptation and Resilience

The workshop in Santiago was held on June 28 at the Centro de Innovación y Capacitación Profesional (CAPEX) in Santiago and co-hosted by CDES. A total of 63 people (35% females) attended, including private sector, local government, NGO and university leaders. Prior to the workshop, CDES had coordinated a meeting with the Zonafranca Corporation to learn more about its infrastructure, community and private sector engagement. Following a quick campus tour, the workshop began with opening remarks from Planning for Climate Adaptation COP Indhira de Jesús and Carlos Fondeur from CDES, followed by a presentation synthesizing the studies on climate change and risk management in Santiago by Mirtha Saleta of CDES and a presentation on the Planning for Climate Adaptation Project. The main speaker was Amy Longworth, Director of the Boston Green Ribbon Commission who presented the Commission model and spoke about its origins, mission and role; organizational structure; benefits of membership to the members and benefits of the Commission to the City of Boston; changes in strategy over time; financial support and results.

The presentation led to an open discussion on the need for an implementation plan on climate change adaptation and the role the private sector can play towards its implementation, which Santiago has already started to promote. The Program plans to continue engagement with the city of Santiago to continue to develop the interest of the private sector in climate change and land use planning issues, with an eye towards eventually developing a best practice manual for other municipalities to learn from the success of the Santiago model.

National District Workshops

The Role of the Private Sector for a Resilient City

The workshop was held on June 29 from 8:30 am- 12:30. A total of twenty-six (26) people (62% females) attended. Planning for Climate Adaptation staff presented the general objectives of the workshop and the challenges for the private sector in terms of climate vulnerability. The main speaker was Amy Longworth, who presented the Commission's model. An interactive session was facilitated by Oriol Montfort of I2UD to identify themes and principle challenges to private sector engagement in climate change and to begin to think through the creation of a mechanism, possibly similar to the Green Ribbon Commission model, to permanently engage the private sector in these issues in coordination with government and civil society.

Participants were able to exchange ideas and began to identify a possible group of key industry stakeholders to engage in the creation of a commission. A list of 34 stakeholders was developed by the group, with members from various sectors, including transportation, agriculture, tourism, energy, environment and health and from private and public sectors including NGOs, universities, and leading interest groups in the country. Conclusions from the group included:

1. Steps to the Creation of a DR Commission

Upon the creation of the 34-member organization list, the group unanimously agreed that it would be necessary to identify a leader among the organizations to spearhead the development of a commission. A recommendation was made to have a second workshop with all 34 member organizations represented to present the climate change challenges facing the Dominican Republic, begin the process of selecting a lead organization and decide upon a governing body.

2. Conduct Needs assessment

A needs assessment to identify areas of collaboration between the sectors was a key point of consensus among workshop participants. These suggested that such an assessment could be done via universities. Private sector and civil society stakeholders could be approached via a survey and asked what they identified as their biggest obstacle when working on climate adaptation programs. Marketing and public relations were identified as areas of interest for both the private and public sectors but further discussion is needed to flesh out the details.

The Role of Civil Society Organizations in Climate Change Adaptation

The workshop was held on June 29 from 2:30-5:30 PM. A total of fifteen (15) people attended (87% females). The NOAA representatives presented their community engagement strategies and specifically the ClimateCARE Model, how it was created; the partnerships that it has developed; the Adaptation Planning Working Group structure and activities and results. They emphasized their community engagement strategy as a means to share ideas and best practices. Following the presentation, the Director of Ciudad Alternativa, an NGO from National District's Ward 3 also shared, their experience with land use planning and participatory mechanisms. Following the presentations, participants were asked to

identify whether or not the experiences could be applied to the DR and to explore ways that they could connect with citizens on these topics. Participants offered up various examples of successful practices in the DR that have involved stakeholders at all levels, including the cleaning of the Higuamo river in San Pedro de Macorís, the initiative to sponsor Laguna Mallén by private companies and Pronatura in Villa Altagracia. Some of the key conclusions from the discussion included:

1. The benefits of a participatory approach

NOAH's presentation on the East Boston case, along with several interventions, all highlighted the need to reach out and work together with the communities in order to better identify their needs and concerns. Planning and other decisions that are informed by the community can go a long way towards building resilience. There was a consensus among the participants, however, that this approach requires a lot of work and commitment.

2. How to engage political representatives and influence decision-making

Building trust with the community was highlighted as one of the best ways to earn their respect and facilitate negotiations with political representatives. Participants also signaled the use of the media as key and the importance of being permanently reminded of the actions that individuals can take and the stakes at risk. The Economic Development Councils (see below) also have a critical role to play.

3. The role of the Economic Development Councils

A powerful platform to organize and channel the voices from civil society has traditionally been the Economic Development Councils, which have legal status at the municipal level. These councils integrate organized civil society groups, neighborhood associations (juntas de vecinos) and central government. The Project has actively engaged the Councils in the development of the PMOTs.

In total, 104 people from different private sector and civil society organizations attended the workshops. The response from all of the workshop participants was positive. There is marked interest on the part of private sector and civil society organizations in getting involved. The main discussion points revolved around the mechanisms through which they can more effectively participate. The Project will follow up on these activities in coordination with INTEC's Climate Information Program (in particular the development of the Resilience and Climate Change Observatory) and Participación Ciudadana's Transparency Project, as both initiatives are already convening civil society and/or private sector to discuss climate policy and governance. The program will also seek to establish public/private partnerships to support the municipalities' land use planning efforts and its implementation.

Component 3: Support the Scale-up of Climate Resilient Land Use Planning Best Practices

To prepare the FEDOMU team to Lead Component 3 in Years 3 and 4, ICMA staff has been actively working on engaging municipal coordinators and administrative staff in Program planning, implementation and initiatives.

Monthly Methodology meetings with FEDOMU's Technical Coordinators

Each month, ICMA staff meets with the FEDOMU team to review and evaluate activities implemented and to plan further actions according to best practices and lessons learned. Erick Dorrejo, Municipal Planning Specialist, has been leading the FEDOMU coordinators in implementing the planning methodology (in accordance with the CCA inclusive Land Use Planning Guide).

Meetings with FEDOMU's European Union Institutional Strengthening Project

On May 23rd, ICMA staff met with FEDOMU European Union Institutional Strengthening Program Coordinators to share work plans for this year. A key part of FEDOMU's mission and strategic plan is to offer technical assistance to municipalities. The Program is intent on coordinating initiatives to generate efficiencies in support of building FEDOMU's capacity to carry out its strategic plan, involving both national staff and FEDOMU's regional associations.

Program Administration and Coordination with other activities

1. *ICMA Operations Manager, Astrid Hernández, country visit (April 4th to 8th).* Ms. Hernández worked with the Program's field office administration staff and visited local implementing partners FEDOMU and INTEC to manage administrative and financial aspects of Program implementation.
2. On April 6th, Andrés Cepeda made a presentation on Program objectives to the Organization of American States' Sustainable Cities Initiative which is training key stakeholders for the efficient management of cities.
3. Alejandro Herrera collaborated in an activity that the Youth Department of the San Pedro de Macorís Municipality held to engage 80 students in a learning experience of climate change adaptation measures and implications. This activity was held at the SPM municipality on Thursday, April 7th.
4. A meeting was held with recently elected mayor of Las Terrenas, Antonio García, where Program objectives, progress to date and following steps were presented. As a result, project staff and the elected mayor agreed on a technical meeting for the third week of July.
5. ICMA Latin America and Caribbean Programs Director, Isabelle Bully-Omictin, conducted a project follow up visit in April (April 25th to 29th). During this time, she had meetings with project partners INTEC and FEDOMU, with DGODT Director Franklin Labour, and with USAID/DR Climate Change office.
6. On May 20th, Erick Dorrejo and Wendy Soto participated in the Santiago's Strategic Development Council meeting with the Dominican Ambassador to the United Kingdom, Mr. Federico Alberto Cuello. Mr. Cuello was in the country assessing the different priorities for international cooperation from the UK and discussing possible collaboration with existing Programs. One of the areas identified was climate change adaptation and how the United Kingdom might provide academic resources to assist the country in this area.
7. Laura Mejia, ICMA financial specialist, Yvelisse Baez, FEDOMU's projects administrator, and Indhira De Jesús, COP, participated in USAID's seminar on financial audits, held in Santo Domingo from May 23rd to 25th.

8. ICMA Sr. Program Manager, Cintya Renderos, visited the DR from June 26 to July 1. Ms. Renderos worked with the Program's field office administration staff and met with local implementing partner FEDOMU to review administrative and financial aspects of Program implementation. Ms. Renderos participated in the Private Sector workshops and is working with Technical Coordinator, Andrea Vogel to identify and develop private sector partnerships.
9. The Program's Technical Coordinator, Andrea Vogel, participated in the "Climate Change and Investigation towards Mitigation" Conference organized by the German Academic Service (DAAD), GIZ and the German Chamber of Commerce. This activity took place on June 11th at the German Chamber of Commerce. It was the first regional conference of its kind and its purpose was to foster exchanges between local and regional climate change adaptation projects, alumni and researchers from the University of Potsdam, Germany. An interest in sending students to our project to conduct investigations as part of their curriculum has emerged from this encounter. This is a possibility that we will explore.
10. On June 16, 2016, at the CORASAAN/CODIA Second International Seminar on Water and Climate Change, Alejandro Herrera Moreno gave a presentation on the Program's vulnerability studies to an audience of more than 800 participants from the public and private sectors on the importance of the climate change vulnerability studies in the four municipalities and their relationship to water resource management.
11. During this quarter, regular coordination meetings continued among USAID Dominican Republic's Climate Change Programs. ICMA continues to organize monthly meetings of USAID/DR Ciudades Líderes en Iniciativas y Metas de Adaptación (CLIMA) program directors and other technical personnel to collaborate and coordinate efforts to streamline processes and implementation of climate resilience in the country.

IV. Outstanding Issues/Challenges and Remedial Actions Taken

As discussed in previous reports the electoral process presented a series of challenges to program implementation. We consider that the program strategy of postponing certain activities and continue with others during this period was in general successful, and overall implementation was minimally affected.

Now we face a new challenge, as three out of four target municipalities will have new governments on August 16th, with expected changes in technical personnel. This will require the program team to invest a significant amount of time working to engage this new leadership in each territory and to re-establish the technical teams, bringing the new staff up to speed.

During this period, the DR VAT exemption process was temporarily unavailable. Following USAID/DR Mission advice, the Program postponed all non-essential procurement and requested USAID approval to pay VAT on essential requests.

V. Planned Performance Objectives/Proposed Activities for next quarter

- Award small grants and launch selected projects by end of September.
- Develop communications materials and continue to implement outreach strategy to strengthen public participation in participatory land use planning inclusive of climate change adaptation.
- Present and validate vulnerability assessment results with community and civil society organizations in each municipality.
- Complete Stage 2 of the PMOT process: Territorial Diagnostic in the land use planning process.
- Engage new municipal authorities and re-assess capacities and needs.
- Confirm technical teams in the municipalities where government changes have occurred and adjust implementation schedule as needed.
- Validate Adaptation Planning tool.
- Launch second round of CC Adaptation and Participatory Management Diplomas (INTEC).
- Launch Diplomado on Land Use Planning and Geographic Information Systems (INTEC).
- Continue to support FEDOMU's institutional strengthening, working closely with their EU funded project.

VI. Upcoming events

- FEDOMU's induction seminar for elected mayors July 20 and 21st.
- Monthly technical team meetings in each municipality.
- Quarterly working group meetings in each municipality scheduled for September.
- Present and validate Climate Change Vulnerability Assessments to community and civil society organizations in each municipality.
- Geographic Information System training facilitated in mid-July
- Implementation visit from Dubuque, Iowa city management officials to Santiago (tentative schedule for early to mid-September).
- Second round of INTEC's university certificate courses (Diplomados) starting September 15th and 16th.

VII. Environmental compliance

The initial environmental examination (LAC-IEE-13-47) issued a categorical exclusion for activities under Intermediate Result 2.1 "Land use planning reduces negative impact from climate change". All activities under the Planning for Adaptation Program fall under this categorical exclusion and therefore do not require the presentation of an EMPR. If at some point during life-of-project, activities are proposed that may have a negative impact on the environment, ICMA will ensure compliance with USAID environmental regulation 22 CFR 216 prior to any on the ground implementation of such activities. No such activities are envisioned at this point.

Annex A - Performance Indicators Summary

The table below presents a summary of the Program's Second Year selected and approved indicators, their level of achievement up to date and a section with comments towards completion of targets. **Please note that indicator targets and achieved results are being reported as cumulative amounts.**

Indicator	Type	Data Source	Unit	Frequency	Base Line	Year 1 (March 2014 to March 2015)		Year 2 (March 2016 to March 2017)		Comments
						Y1 Targets	Y1 Achieved	Y2 Targets	Y2 Achieved	
1. Number of institutions with improved capacity to address climate change issues as a result of USG assistance	Outcome	Institutional capacity-building assessments and work plans	Count	Annual	0	0	0	4	0	<i>In progress:</i> Significant work has been advanced in strengthening institutional capacity at the local and DR Government Level. The Program is working on various initiatives to ensure climate change adaptation issues are addressed while institutional planning is taking place.
2. Number of laws, policies, strategies, plans, or regulations addressing climate change adaptation officially proposed, adopted, or implemented as a result of USG assistance	Output	Program Reports	Count	Annual	0	0	0	4	0	<i>In progress:</i> Program staff continues working on initiatives to assist municipal staff in considering and analyzing legal frameworks inclusive of climate change adaptation measures. During the April to June 2016 period, Erick Dorrejo worked closely with FEDOMU technical coordinators to motivate the Municipal Councils of Las Terrenas and SPM to acknowledge the work advanced towards the municipal land use plan through a resolution. The National District and Santiago have Municipal Council Resolutions acknowledging the Land Use Plans.
3. Number of stakeholders using climate information or analysis in their decision-making supported by USG assistance	Outcome	Institutional capacity-building assessments and work plans	Count	Annual	0	0	0	10	0	
4. Number of climate change adaptation tools, technologies and methodologies developed, tested or adopted supported by USG assistance	Outcome	Program Reports	Count	Quarterly	0	1	1	2	1	Year 1: PMOT Guide incorporating climate change adaptation tools.

Indicator	Type	Data Source	Unit	Frequency	Base Line	Year 1 (March 2014 to March 2015)		Year 2 (March 2016 to March 2017)		Comments
						Y1 Targets	Y1 Achieved	Y2 Targets	Y2 Achieved	
5. Number of people receiving training in global climate change as a result of USG assistance	Output	Attendance lists/Program Reports	Count	Quarterly	0	64	113	96	202	Implementation Year 2: 27 (56% women) trained on the use and implementation of the PMOT Guide for G-12 personnel. 36 people (56% women) trained on the use and implementation of the PMOT Guide (members of FEDOMU, DGODT, ADN, STGO, SPM and LT Municipalities and ICMA staff). 15 people (60% women) in the ICF Int'l Training of Trainers on Climate Change Adaptation Planning. 11 people (x% women) in the workshop on proposal development for community participation projects. Total Year 2: 89 people Implementation Year 1: 35 people (56% women) in climate change adaptation certificate course. 30 people (53% women) in citizenship participation and LUP certificate course. 19 people (63% women) ICF Int'l Training of Trainers in "Integrating Vulnerability Assessments to LUP". 29 (59% women) INTEC workshop: "Gender and Climate Change Adaptation: relation and importance". Total Year 1: 113 people
6. Number of climate vulnerability assessments conducted as a result of USG assistance.	Output	Program Reports	Count	Quarterly	0	4	0	4	4	Climate Vulnerability Assessments for DN, STGO, SPM, LT have been completed and presented to the target municipalities.
7. Number of city partnership programs fostered as a result of USG assistance.	Output	Program Reports	Count	Quarterly	0	1	0	3	2	Partnerships among officials from Dubuque, Iowa, and the municipality of Santiago; the city of Fort Lauderdale, Florida and San Pedro Macoris were established. During this reporting period, exchange visits from Dominican officials to their US partner cities took place (except for DN to Austin because of elections). Initial visit by the City of Austin marked the beginning of a partnership with the National District.

Indicator	Type	Data Source	Unit	Frequency	Base Line	Year 1 (March 2014 to March 2015)		Year 2 (March 2016 to March 2017)		Comments
						Y1 Targets	Y1 Achieved	Y2 Targets	Y2 Achieved	
8. Number of community organizations, including those representing vulnerable groups, that actively participate in municipal participatory planning processes presenting climate change adaptation related issues or proposals	Outcome	Program Reports	Count	Quarterly	0	0	0	3	0	Program staff, in coordination with A. Cepeda, Citizen Participation Specialist, continue reaching out to community and vulnerable groups at the municipal and national level to identify key community stakeholders and developing a communications strategy to strengthen participation mechanisms. The small grants process was initiated during this quarter to strengthen climate change adaptation capacities within community and civil society organizations at each target municipality.

Annex B - Summaries of Municipal Context

DISTRITO NACIONAL

DELIMITACION Y ANALISIS DEL CONTEXTO

POT- Capital

Resumen: La centralidad y concentración de actividades productivas de todo el contexto en el Distrito Nacional, incide en el desplazamiento de los residentes en el contexto delimitado hacia el Distrito Nacional en busca de oportunidades laborales y educativas, al igual que trámites y procesos administrativos principalmente. La expansión del uso de suelo urbano por todo el contexto evidencia la vinculación entre la causa de los problemas y el impacto en el territorio del Distrito Nacional. El predominio de uso agrícola (47.22%) en el contexto delimitado¹ presenta una oportunidad para garantizar la seguridad alimentaria del Distrito Nacional.



1 Contexto inmediato:

Santo Domingo Este
Santo Domingo Oeste
Santo Domingo Norte
Boca Chica
Pedro Brand
Guerra
Los Alcarrizos
Bajos de Haina

DATOS

Población²: 2,498,563 Habs.

Superficie: 1,340.78 Km²

Densidad: 1,864 Habs/Km²

Provincias (2)

Municipios (8)

Mapa I - Delimitación de Contexto. Fuente: ONE / Elaboración: Leapfrog.

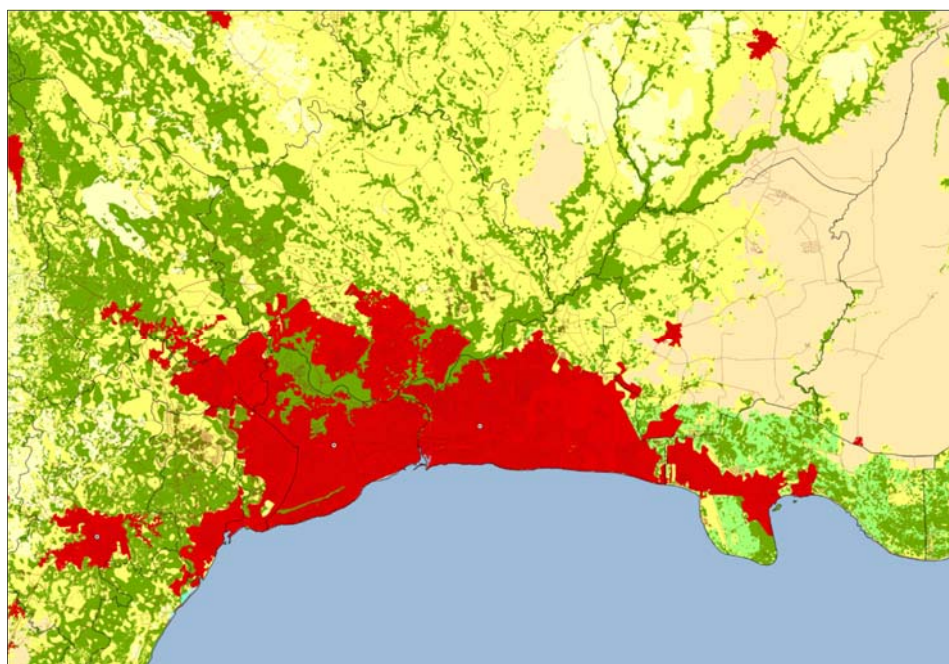
ONE

² Censo 2010 /

CARACTERIZACION

AMBIENTAL	SOCIO-ECONOMICO	ESPACIAL
Recursos naturales definen la morfología de la ciudad: Sistema hidrográfico (Río Ozama e Isabela), el litoral costero de emersión, planicie en la que se identifican tres terrazas.	En el área metropolitana reside el 35% de la población nacional, (10% habita en el Distrito Nacional, mientras que el 25% restante reside en el contexto)	<u>Puertos:</u> Río Haina, Santo Domingo, Boca Chica y Multimodal Caucedo. <u>Aeropuertos:</u> Internacional de Las Américas (28.57% pasajeros) y Joaquín Balaguer.
El Área Metropolitana de Santo Domingo se asienta sobre la región geomorfológica del Llano Costero Suroriental del Caribe.	Aproximadamente el 50% del PIB nacional se produce en el Área Metropolitana de Santo Domingo (Banco Central).	Sistema autopistas inter-urbanas (Autopista Duarte, Autopista 6 de noviembre, Autopista De las Américas y Circunvalación de Santo Domingo).
Región hidrográfica (Ozama-Nizao), supera los 1,000 km ² de extensión superficial.	Primacía urbana de la ciudad de Santo Domingo, consolidándose a partir de la época de la dictadura (1930-1961).	Disposición final de los residuos sólidos localizado en el municipio de Santo Domingo Norte (Recibe 4,000 Ton/día).
Sistema Natural: Cinturón Verde, Parque Nacional Humedales del Ozama, Parque Submarino La Caleta y Cueva los tres Ojos.	Los datos indican que el crecimiento de la población residente en el contexto será mayor (38.0%) que el crecimiento proyectado para la capital (20.6%).	Debido a la gestión centralizada del sistema de salud, el Área Metropolitana concentra un porcentaje significativo de los centros de salud a nivel nacional.

USO AGRICOLA 633.07 Km ² (47.22%)
USO FORESTAL/NATURAL 414.61 Km ² (30.92%)
USO URBANO 292.82 Km ² (21.84%)
CUERPOS DE AGUA 0.28 Km ² (0.02%)
TOTAL 1,340.78 Km ² (100.00%)



Mapa II - Uso de Suelo Predominante. Fuente: Ministerio de Medio Ambiente (2012) / Elaboración: Leapfrog

NIVEL DE INCIDENCIA DEL CONTEXTO

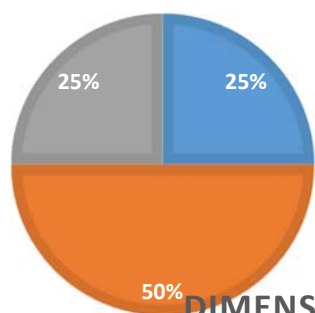
CONDICIONES NATURALES PARA LOS ASENAMIENTOS HUMANOS.	
SISTEMA HIDROGRAFICO	(1) Cuencas de los ríos Ozama e Isabela limitan el crecimiento hacia el norte y el este. (2) Localizadas en la región hidrográfica Ozama-Nizao.
LITORAL MARINO	(1) Limita todo el sur desde el Km. 12 de la Carretera Sánchez hasta la Caleta en el municipio de Boca Chica.
CINTURON VERDE	(1) Condiciona el crecimiento urbano y al mismo tiempo protege una serie de fuentes acuíferas. (2) En la actualidad tiene una superficie de 84 Kms ² para una reducción de un 35.5% desde su creación. (3) Dentro de su superficie han sido creados siete (7) parques, situados en el contexto delimitado.

DOMINIO – DEPENDENCIA

Aspectos	DO	DE		Descripción
Gobierno	87.5	12.5	-	Organismos de gobierno y de gestión.
Administrativo	100.0	0.0	DO	Trámites administrativos.
Gobierno	100.0	0.0	DO	Gestión de recursos y/o toma de decisiones.
Flujo materia	100.0	0.0	DO	Intercambio de bienes y servicios.
Flujo carga	100.0	0.0	DO	Flujos de transporte de carga.
Flujo personas	100.0	0.0	DO	Movimiento de personas (razones laborales, educativas, recreativas).
Puertos	75.0	25.0	-	Rutas marítimas y/o puertos.
Aeropuertos	0.0	100.0	DE	Rutas aéreas y/o aeropuertos.
Infraestructura	87.5	12.5	-	Cobertura de infraestructuras y servicios básicos.
Agua	0.0	100.0	DE	Nivel de acceso a las fuentes de agua. (Dependencia fuera del contexto delimitado)
Energía	0.0	100.0	DE	Provisión de energía eléctrica. (Dependencia fuera del contexto delimitado)

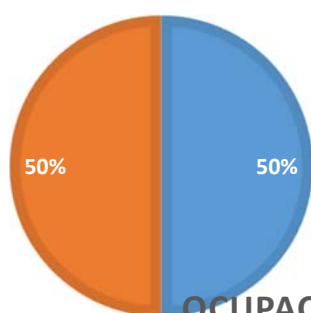
JERARQUIA FUNCIONAL ASENTAMIENTOS HUMANOS DEL CONTEXTO

■ Grande ■ Mediano ■ Pequeño



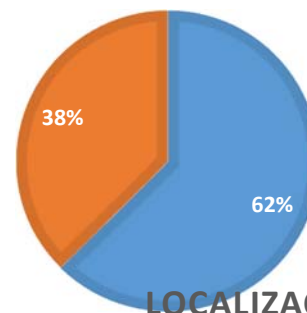
DIMENSION

■ Dispersa ■ Concentrada



OCUPACION

■ Valle ■ Costera



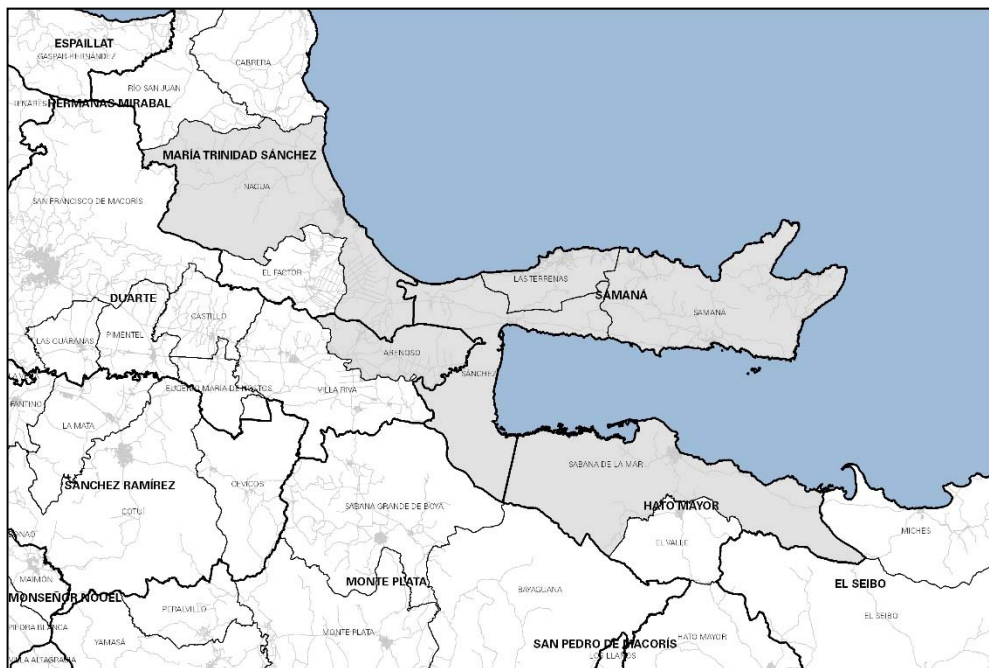
LOCALIZACION

LAS TERRENAS

Plan Municipal de Ordenamiento Territorial

DELIMITACION Y ANALISIS DEL CONTEXTO

Resumen: En la actualidad el proceso de urbanización del municipio de Las Terrenas no se expande fuera de sus límites político-administrativos, en tal sentido el área identificada como contexto es aquella compuesta por territorios no continuos, contenedores de actividades y funciones que inciden en el municipio directamente. El contexto contiene las infraestructuras necesarias para conectar el municipio con el resto del país. El uso de suelo predominante es el agrícola (1,250.61 Km²) ocupando el 64.28% del contexto delimitado. De igual manera es importante el recurso marino en la configuración ambiental, social y económica de las comunidades analizadas.



Mapa I - Delimitación de Contexto. Fuente: ONE / Elaboración: Leapfrog.
2010/ONE

1 Contexto funcional:

Samana
Sanchez
Sabana de la Mar
Nagua
Arenoso

DATOS

Población²: 189,992 Habs.

Población³: 162,565 Habs.

Variación: + 15.51%

Superficie: 1,945.48 Km²

Densidad: 98 Habs/Km²

Provincias (4)

Municipios (5)

% Habs. del país (2.01%)

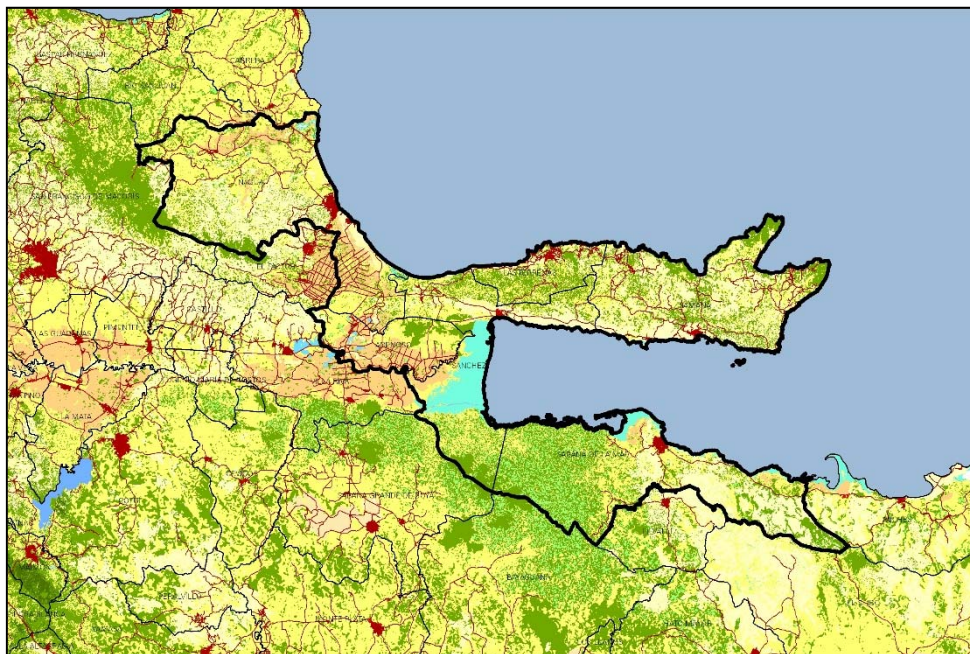
² Censo

³ Censo 2002/ONE

CARACTERIZACION

AMBIENTAL	SOCIO-ECONOMICO	ESPACIAL
Áreas protegidas identificadas en el contexto: Santuario Marino, Cabo Cabrón (Parque natural), Salto del Limón, Los Haitises, Bajo Yuna, Cabo Samaná. Existen nueve cuencas hidrográficas , ocupando una superficie de 879.2 Km ² Sierra Samaná (Altitud 400 msnm), material predominante roca carstica. Los Haitises: Unidad hidrogeológica especial con una superficie total de 1,682 km ² (en el municipio de Sanchez área de 111.99 Km ² : Clase de suelo VII). El Río Yuna tiene 208 km de largo, desemboca en la Bahía de Samaná .	Actividades productivas destacadas: A.-Turismo , principalmente sol y playa. B.-Pesca: Los Robalos, Sanchez, Sabana de la Mar, Las Terrenas, Las Galeras. C.-Agricultura: Juana Vicente, Samaná, Los Naranjitos, Las Terrenas, Las Galeras. En el 2013 la provincia de Samaná ocupó el lugar 21 de 32 provincias a nivel nacional en empleos generados . Población: 51.51% Hombres / 48.49% Mujeres. Todos los municipios del contexto incrementaron su población con excepción de Sanchez (-8.14%) Declarado Polo turístico de la Provincia de Samaná (Decreto 91-94).	Red de carreteras: Conexión de la península con el resto del país - Autopista del Nordeste (Juan Pablo II) 105.59 Km., Boulevard turístico del Atlántico (123.64 Kms.), Autopista Nagua – Samaná. Infraestructuras estratégicas: Aeropuerto Internacional El Catey, Puerto Arroyo Barril. Principales asentamientos humanos: Santa Bárbara, El Limón, Las Terrenas, Las Galeras, Arenoso, Los Robalos, La Reforma, Matancitas y Nagua. Los asentamientos humanos localizados en la península tienen 101,404 Habs.

USO AGRICOLA 1,250.61 Km ² (64.28%)
USO FORESTAL/NATURAL 724.48 Km ² (34.80%)
USO URBANO 13.77 Km ² (0.71%)
CUERPOS DE AGUA 4.16 Km ² (0.21%)
TOTAL 1,945.48 Km ² (100.00%)



Mapa II - Uso de Suelo Predominante. Fuente: Ministerio de Medio Ambiente (2012) / Elaboración: Leapfrog

NIVEL DE INCIDENCIA DEL CONTEXTO

CONDICIONES NATURALES PARA LOS ASENAMIENTOS HUMANOS.	
SIERRA SAMANA	(1) Provocando inundaciones. (2) Crecidas por el río y riachuelos. (3) Permea el agua y crea las ciénagas. (4) Al llover en la sierra, afecta la ciudad. (5) Nivel de peligrosidad en las pendientes, accesos al municipio.
HUMEDALES	(1) Mayor riesgo en las edificaciones construidas en la zona de humedales.
LITORAL MARINO	(1) Posibilidad de Tsunami. (2) Mayor parte infraestructura hotelera en la costa, con riesgo ante el incremento del nivel del mar. (3) Disposición infraestructura vial crítica ante un posible desalojo rápido.

DOMINIO – DEPENDENCIA

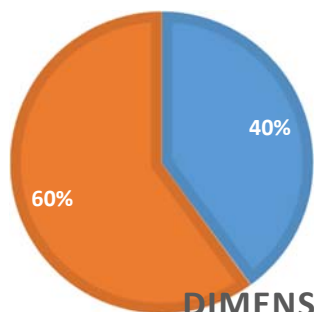
Aspectos	DO	DE		Descripción
Gobierno	60.0	40.0	-	Organismos de gobierno y de gestión.
Administrativo	100.0	0.0	DO	Trámites administrativos.
Gobierno	100.0	0.0	DO	Gestión de recursos y/o toma de decisiones.
Flujo materia	100.0	0.0	DO	Intercambio de bienes y servicios.
Flujo carga	100.0	0.0	DO	Flujos de transporte de carga.
Flujo personas	100.0	0.0	DO	Movimiento de personas (razones laborales, educativas, recreativas).
Puertos	0.00	100.0	DE	Rutas marítimas y/o puertos. (Dependencia fuera del contexto delimitado).
Aeropuertos	0.0	100.0	DE	Rutas aéreas y/o aeropuertos.
Infraestructura	100.0	0.0	DO	Cobertura de infraestructuras y servicios básicos.
Agua	80.0	20.0	-	Nivel de acceso a las fuentes de agua.
Energía	0.0	100.0	DE	Provisión de energía eléctrica. (Dependencia fuera del contexto delimitado).

JERARQUIA FUNCIONAL ASENTAMIENTOS HUMANOS DEL CONTEXTO

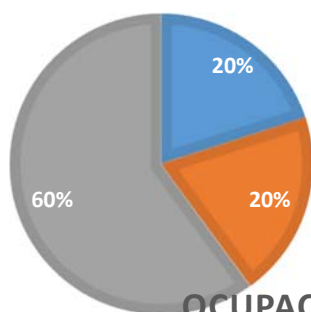
■ Centro local ■ Pequeño

■ Lineal ■ Dispersa ■ Concentrada

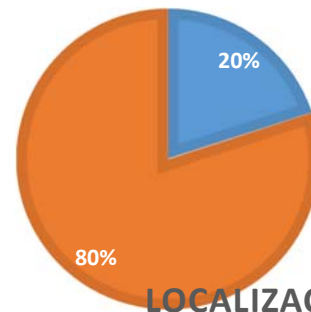
■ Valle ■ Costera



DIMENSION



OCUPACION



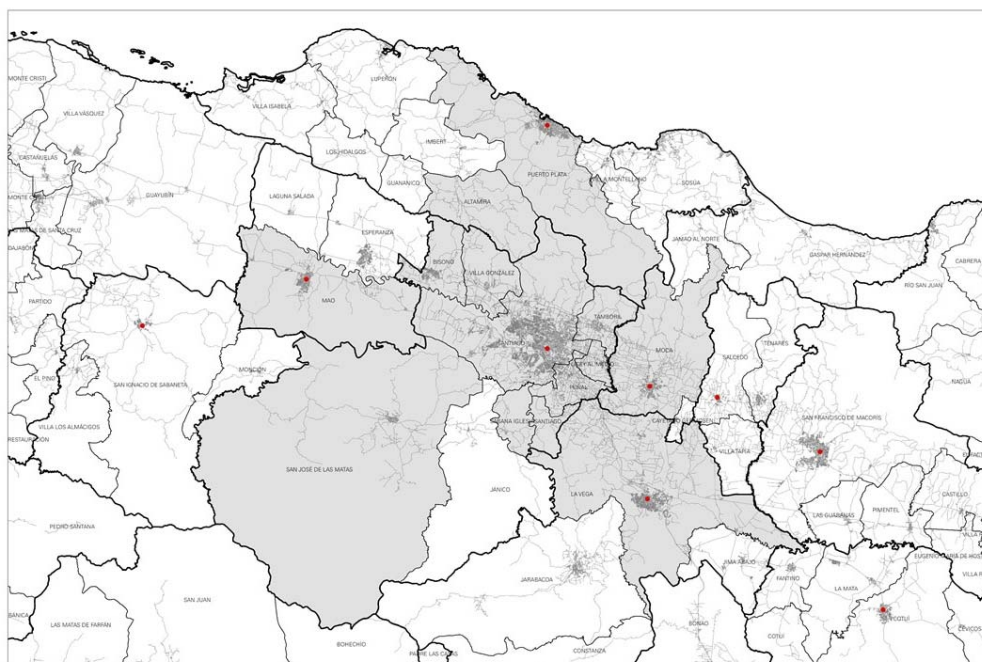
LOCALIZACION

SANTIAGO

Plan Municipal de Ordenamiento Territorial

DELIMITACION Y ANALISIS DEL CONTEXTO MUNICIPAL

Resumen: El contexto delimitado¹ presenta un uso predominante de suelo forestal (2,327.84 Km²), en cuanto a los recursos naturales la cuenca del Río Yaque del Norte es fundamental, mientras que las cordilleras condicionan el crecimiento de los asentamientos humanos en el municipio. Alta capacidad productiva de las tierras identificadas en el uso de suelo agrícola (2,001.72 Km²). El centro de intercambio de bienes y servicio se localiza en la ciudad de Santiago. La actividad socio-económica de Santiago y su región está fundamentada en “complementariedades y ventajas competitivas” que fortalecen su identidad y los mecanismos de cohesión territorial.



¹ Contexto inmediato:

Tamboril
Licey
Puñal
Villa González

¹ Contexto funcional:

Sabana Iglesia
Baitoa
Villa Bisonó
San José de las Matas
Jánico
Puerto Plata
Altamira
La Vega
Moca
Mao

Mapa I - Delimitación de Contexto. Fuente: Oficina Nacional de Estadísticas / Elaboración: Leapfrog.

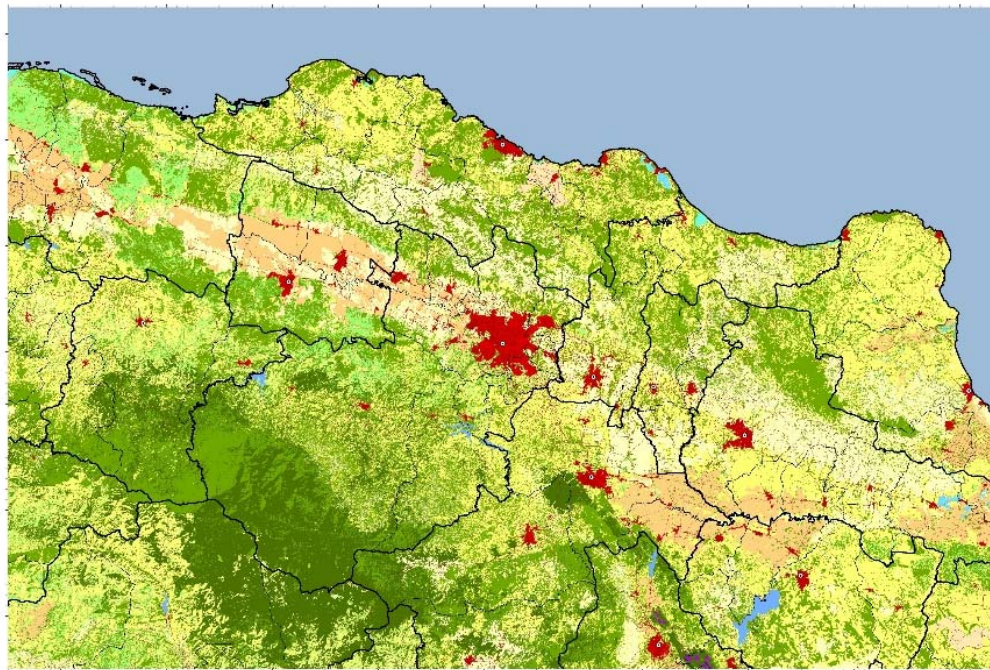
Datos

Superficie (4,331.80 Km²) / Densidad (223.13 Habs./Km²) / Provincias (5) / Municipios (14)

CARACTERIZACION

AMBIENTAL	SOCIO-ECONOMICO	ESPACIAL
Unidades fisiográficas: Cordillera Central (Principal sistema montañoso del país), Cordillera Septentrional (Predominio producción forestal y cultivos permanentes como el café), Valle del Cibao (compuesto por dos unidades hidrológicas distintas: Valle del Yaque del Norte y Valle del Yuna).	Población: (966,581 Habs.) / Masculino – Femenino (50%) / Población urbana (60%) localizada en Tamboril, Mao, La Vega, Moca y Puerto Plata.	Jerarquía funcional: Principal centro (Santiago). Centros secundarios (La Vega, Moca y Puerto Plata). Centros terciarios (Tamboril, Villa Gonzalez, Navarrete)
	La comercialización, intermediación, así como el acopio y distribución de productos agrícolas, fortalecen los mercados interregionales.	Producción de agua: Localizada en el Complejo Tavera – Bao – López – Angostura. / Acueductos (Licey, Tamboril, Puñal y Villa Gonzalez).
	Dinámica socio-económica: Flujo de personas, bienes y servicios. Productos agropecuarios y bienes terminados. Producción de bienes en las zonas francas, comercio y servicios financieros.	Infraestructuras estratégicas: <u>Aeropuerto</u> Internacional del Cibao / <u>Redes de carreteras:</u> Corredor Duarte, Avenida Hispanoamericana, Carretera Luperón y Autopista Joaquín Balaguer).
Cuenca Río Yaque del Norte: Es la más grande del país con una extensión de 7,053.0 km ² . Fluye por unos de 44 kms. en su cuenca media en el municipio de Santiago.		

USO AGRICOLA (45.02%) 2,001.72
USO FORESTAL (52.36%) 2,327.84
USO URBANO (2.37%) 105.45
CUERPOS DE AGUA (0.25%) 11.19
TOTAL (100.00%) 4,446.20



Mapa II - Uso de Suelo Predominante. Fuente: Ministerio de Medio Ambiente (2012) / Elaboración: Leapfrog

NIVEL DE INCIDENCIA DEL CONTEXTO

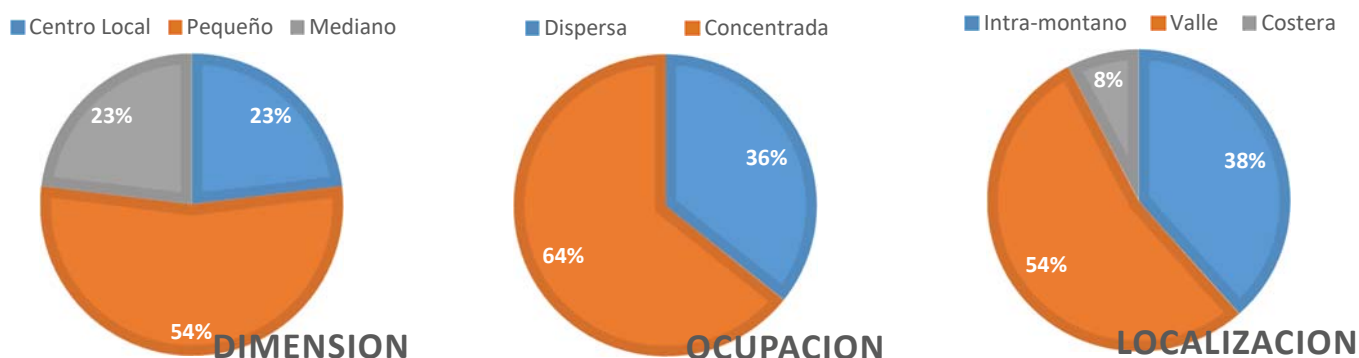
CONDICIONES NATURALES PARA LOS ASENTAMIENTOS HUMANOS.

CORDILLERA SEPTENTRIONAL	(1) Falla sísmica al norte del municipio y la ciudad de Santiago. (2) Pendientes mayores al 30% susceptibles a deslizamiento. (3) Deforestación y erosión de los suelos, amenazan recursos hídricos. (4) presencia de suelos de gran inestabilidad.
VALLE DEL CIBAO	(1) Calidad de las tierras para la producción agrícola. (2) Suelos de aluvión, susceptibles de aumento del riesgo sísmico. (3) Presencia de la Cuenca Yaque del Norte, condiciona la vulnerabilidad ante inundaciones.
CORDILLERA CENTRAL	(1) Altos niveles de erosión y deforestación, afectan suministro de agua. (2) Infraestructura Hidroeléctrica, susceptible de aumentar el riesgo a inundaciones. (3) Dependencia suministro de agua potable.

DOMINIO – DEPENDENCIA

Aspectos	DO	DE		Descripción
Gobierno	100.0	0.0	DO	Organismos de gobierno y de gestión
Administrativo	100.0	0.0	DO	Trámites administrativos
Gobierno	100.0	0.0	DO	Gestión de recursos y/o toma de decisiones
Flujo materia	100.0	0.0	DO	Intercambio de bienes y servicios.
Flujo carga	100.0	0.0	DO	Flujos de transporte de carga.
Flujo personas	100.0	0.0	DO	Movimiento de personas (razones laborales, educativas, recreativas).
Puertos	0.0	100.0	DE	Rutas marítimas y/o puertos.
Aeropuertos	0.0	100.0	DE	Rutas aéreas y/o aeropuertos.
Infraestructura	100.0	0.0	DO	Cobertura de infraestructuras y servicios básicos.
Agua	0.0	100.0	DE	Nivel de acceso a las fuentes de agua.
Energía	0.0	100.0	DE	Provisión de energía eléctrica. (Dependencia fuera del contexto delimitado)

JERARQUIA FUNCIONAL ASENTAMIENTOS HUMANOS DEL CONTEXTO



SAN PEDRO DE MACORIS

DELIMITACION Y ANALISIS DEL CONTEXTO

Plan Municipal de Ordenamiento Territorial

Resumen: Una de las potencialidades identificadas se expresa al cuantificar el uso de suelo agrícola (67.20%), como el predominante en el contexto. El proceso de expansión urbana del municipio de San Pedro de Macorís tiene un ámbito de incidencia directa circunscrito al inmediato urbano¹, cuya superficie a penas ocupa 20.08 Kms² (0.40%) del territorio analizado (4,998.80 Kms²). La localización de las entidades regionales en el municipio de San Pedro evidencian el rol articulador del municipio en el contexto inmediato y los municipios más próximos.



Mapa I - Delimitación de Contexto. Fuente: ONE / Elaboración: Leapfrog.

¹ Contexto inmediato:

Quisqueya
Guayacanes
Consuelo
Ramon Santana

² Contexto funcional:

San José de los Llanos
La Romana
El Seibo
Miches
Hato Mayor
El Valle
Sabana de la Mar
Boca Chica
Santo Domingo Este
Distrito Nacional
Villa Hermosa

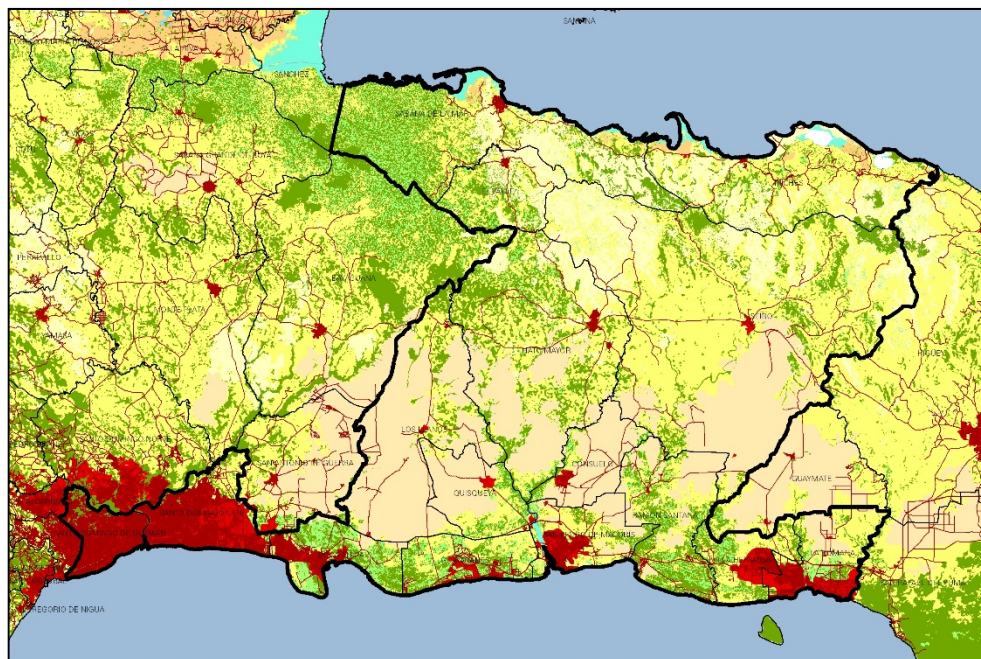
POBLACION ³	SUPERFICIE	DENSIDAD	PROVINCIAS	MUNICIPIOS	DN
2,552,667 Habs.	4,998.80 Km ²	511 Habs/Km ²	6	15	1

³ Censo 2010/ONE

CARACTERIZACION

AMBIENTAL	SOCIO-ECONOMICO	ESPACIAL
Sistema hidrográfico: Río Higüamo, el Río Soco y el Río Cumayasa.	La superficie del contexto delimitado es un 10.40 % del total nacional.	Red vial: Autovía del Este, Carretera Mella, Carretera Hato Mayor – el Puerto, Carretera Sabana de la Mar Miches, Autopista Las Américas, Boulevard de Juan Dolio, Carr. SPM – Ramon Santana.
Cordillera Oriental (dirección oeste-este), se encuentra la Sierra de El Seibo, en ella nacen los ríos Higüamo y Soco.	En el sistema de asentamientos humanos localizados en el contexto reside el 27.03% de total nacional.	Dentro de los municipios identificados en el contexto, se han creado dos nuevos municipios entre el 2002 y el 2010 (Guayacanes y Villa Hermosa)
Cuencas hidrográficas: Río Higüamo (mayor superficie de la región – 1,148 Kms ²) y del Río soco (el área de aportación es de 1,004.64 Kms ²).	Vocación económica: Agrícola (frutales, cultivos tradicionales, leguminosa), pecuaria (ganado vacuno, porcino, bovino), agroindustrias (cítricos, melones, cacao, caña de azúcar), industrias, turismo y pesca. Existencia de cuatro Parques de Zonas Francas en el contexto delimitado.	Agua potable. Principal fuente de agua superficial: Río Soco. Numerosas tomas de agua subterráneas (pozos) localizadas en el contexto delimitado.
Áreas Protegidas: Refugio Vida silvestre Río Soco y Reserva Río Higüamo, Río Cumayasa, Reserva Antropológica Cueva Maravillas y Refugio Laguna Mallen.		

USO AGRICOLA 3,358.98 Km ² (67.20%)
USO FORESTAL/NATURAL 1,296.90 Km ² (25.94%)
USO URBANO 328.29 Km ² (6.57%)
CUERPOS DE AGUA 14.64 Km ² (0.29%)
TOTAL 4,998.80 Km ² (100.00%)



Mapa II - Uso de Suelo Predominante. Fuente: Ministerio de Medio Ambiente (2012) / Elaboración: Leapfrog

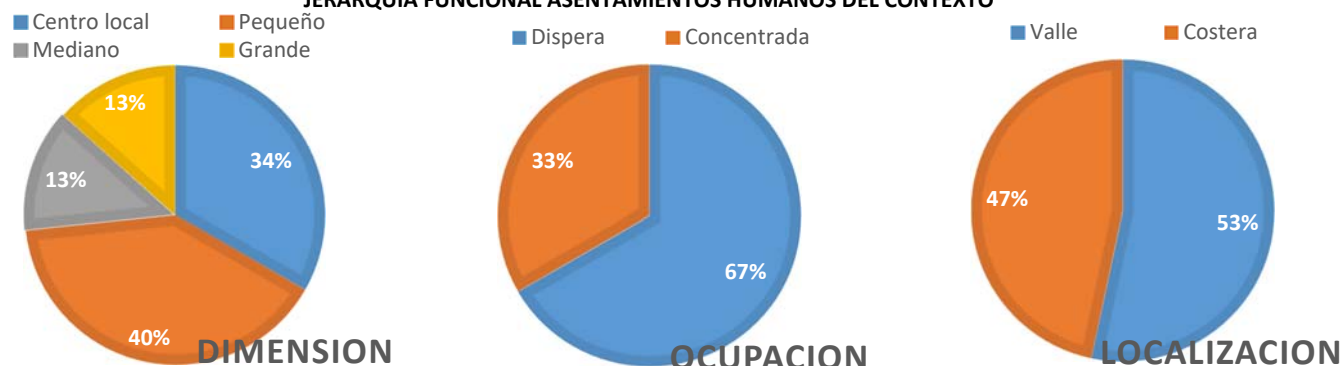
NIVEL DE INCIDENCIA DEL CONTEXTO

CONDICIONES NATURALES PARA LOS ASENTAMIENTOS HUMANOS.	
CORDILLERA ORIENTAL	(1) Deslizamientos de tierra ocasionados por la deforestación. (2) Incidencia negativa en la biodiversidad.
RIOS HIGUAMO & SOCO	(1) Inundaciones (2) Crecimiento condicionado zona de manglares y bosques húmedos. (3) Proceso de contaminación que limita su uso.
LITORAL MARINO	(1) Zona urbanizada frente al litoral marino expuesta a mareas de tempestad debido a la proximidad a la costa y baja elevación.
AREA PROTEGIDA	(1) Zona de manglares y bosques húmedos condicionan ocupación.

DOMINIO – DEPENDENCIA

Aspectos	DO	DE		Descripción
Gobierno	100.0	0.0	DO	Organismos de gobierno y de gestión.
Administrativo	81.3	18.7	-	Trámites administrativos.
Gobierno	93.3	6.7	-	Gestión de recursos y/o toma de decisiones.
Flujo materia	100.0	0.0	DO	Intercambio de bienes y servicios.
Flujo carga	93.3	6.7	-	Flujos de transporte de carga.
Flujo personas	81.3	18.7	-	Movimiento de personas (razones laborales, educativas, recreativas).
Puertos	20.0	80.0	-	Rutas marítimas y/o puertos.
Aeropuertos	0.0	100.0	DE	Rutas aéreas y/o aeropuertos.
Infraestructura	100.0	0.0	DO	Cobertura de infraestructuras y servicios básicos.
Agua	0.0	100.0	DE	Nivel de acceso a las fuentes de agua.
Energía	0.0	100.0	DE	Provisión de energía eléctrica. (Dependencia fuera del contexto delimitado).

JERARQUIA FUNCIONAL ASENTAMIENTOS HUMANOS DEL CONTEXTO



Annex C - Trip Reports

TRIP REPORT

CityLinks type exchange: Santiago to Dubuque

April 5th – 8th, 2016



The International City / County Management Association (ICMA), as part of the CityLinks component to the Planning for Climate Adaptation Program invited a delegation from Santiago de los Caballeros, Dominican Republic to visit the City of Dubuque, Iowa for the second partnership exchange between those two municipalities. A City delegation visit to Santiago took place from November 16th to the 20th, 2015.

The objective of the **CityLinks** program initiated in 1997 with funding from USAID is to network officials and senior staff from ICMA's more than 10,000 members to help identify and implement sustainable solutions to local municipal problems. This program is centered on the principle that well managed cities are the key to the efficient provision of public services, the rational management of resources, economic growth, and political stability and that practitioners are the best suited to share their best practices and experiences.

The Santiago delegation was comprised of: Director of Urban Planning at the Municipal Office for Land Use Planning, Hipolito Ambriorix Gomez Molina; Director of Land Use Planning at the Municipal Office for Land Use Planning, Marco Antonio Gomez Rodriguez; Director of the Strategic Plan of Santiago at the Office of the Strategic Plan, Reynaldo Antonio Peguero Gomez; Regional Coordinator for FEDOMU, Rosa Arlene Maria de Rivas and Project Formulation staff from FEDOMU, Yamilkis Inmaculada Flores Guzman. ICMA DR Planning Specialist, Erick Joan Dorrejo Medina also joined the delegation, as well as Catalina Gutierrez-Paez, who is an ICMA Assistant Program Manager at the home office in Washington, DC.

Tuesday, April 5, 2016

Day 1: Welcome breakfast with the Mayor, City of Santiago Presentations & Dubuque City Manager Presentation, Lunch, Community Tour and Dinner with Community Partner

During the morning, we had a welcome breakfast with the Mayor along with the delegates who visited Santiago in December 2015. The Assistant City Manager, Cindy Steinhauser was also part of the reception. Basic introductions took place by both parties. Soon after, other city staff joined the meeting for a presentation of the City of Santiago to the departmental staff in Dubuque. The gathering provided the opportunity for the City of Dubuque officials and other departmental staff to understand ways in which the City and ICMA can provide recommendations and strategies to follow the technical visits by Dubuque. Marcos Gomez, Director of Urban Planning at the Municipal Office for Land Use Planning spoke about Santiago de los Caballeros and its river, the Rio Yaque, which runs across the city and is the principal hydrological resource for the region. He explained that overdevelopment is a concern to the municipality as there is a lack of infrastructure and geographical boundaries that set limits for agricultural and water needs.



Once Marcos finished his presentation there was some time for basic questions and answers by some of the City Staff whom we were scheduled to meet later in the week for more specific presentations.

The City Manager of Dubuque, Mike Van Milligen gave us a quick overview about the city, its council type of government, and all the awards the city has acquired. Some of the highlights of his presentation in relation to Climate Change Adaptation were the Water and Resource Recovery Center which uses

anaerobic digestion, and allows the city to capture methane for some of the building's energy use. A creek restoration project is also in effect to facilitate storm water management and the city to adapt through a disaster prevention measure.

Growth of the city has been planned for and managed throughout with the help of the comprehensive plan of 1995. Agricultural land was purchased and transitioned to industrial parks with city water and sewer connections, 7 thousand acres have been annexed, a 35% increase.

Mike Van Milligen emphasized the importance given to the Mississippi River once Dubuque citizens realized it was an asset. This change of focus gave way to the rejuvenation of the river, followed by the downtown area, and investments in the warehouse system.

That afternoon Cindy Steinhauser took the delegation for a community tour for an overview of the results from their latest comprehensive development plan. The delegation had the opportunity to see the industrial parks, some of the development of the Bee Branch Watershed Restoration Project, the restored harbor area around the Mississippi River, and historic redevelopment of the Roshek Building and other downtown buildings that have developed into apartment lofts, retail and shared spaces for art and community growth.

Issues/Strategies Discussed:

- Earthquakes limitations.
- Limit and resource= the river, to be taken advantage of and preserve for future generations.
- Large risk of flooding by the river, Data and studies that show the current speeds. Intervention of structure today provokes high flooding risks and bad dam management.
- In Santiago, the wastewater plant and jail present high flooding risks. Flooding occurred in 2007. Dams are managed by a state and private group who control the dams. No public governing agency manages public services, such as the water treatment facilities.
- Mitigation measures: Inter-American Development Bank (IDB) and ICMA support planning projects that can be more equitable socially and economically.
- Proyectos de dignificación: Vuelta Alta, Santiago. In 2010, the Mayor convinced the community to move further back from the canal for the area to be restored.
- Hoyo de Julia
- Santiago Green Belt Project is protected under the local government: A result of collaborating with central agencies during zoning demarcations.
- Gurabo, parque lineal
- Community Outreach/Engagement Process
- Comprehensive Planning
- Sustainability Measures i.e., 4 STAR



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Mike Van Milligen
ctymgr@cityofdubuque.org
City Manager

Roy D. Buol
Rdbuol@cityofdubuque.org
Mayor
City of Dubuque, Iowa

Wednesday, April 6, 2016

Day 2:

Meeting with Planning Services on Land Use planning and Comprehensive Plan, Public Works Luncheon, Tour of Watershed Initiatives, Dinner with Sister City Commissioners

Planning and public health officials have worked together to serve as the lenses for Dubuque's Sustainability Plan with 3 focus areas: Regional Planning, City Planning and City Zoning. The city's comprehensive economic development strategy seeks to coordinate and improve the quality of life in the region. During the update for the comprehensive Plan, the city will be soliciting input from the community. Part of this process involves private developers that meet with community groups to adjust and reduce resistance.

Mary Rose, the city's public health Specialist explained the *healthography* model which evaluates public and environmental health in relation to urban planning. Measures such as air quality, social equity and physical activity levels are considered. This model utilizes indicators for health with respect to access to potable water, housing, food, healthcare, education, and economic access.



Greater Dubuque Development: A private tent organization that bylaws guarantees city's participation, council members, and the director of economic development.

Its funding is $\frac{2}{3}$ private, and $\frac{1}{3}$ city and county government. This organization conducts a feasibility study for businesses extension and expansion. It was noted that the #1 issue in Dubuque is the lack of workforce. Some workforce solutions implemented by this organization are:

- National Marketing
- Sustainable operations

-Entrepreneurs

Issues/Strategies Discussed:

- Community Engagement Process Plan
- Lack of Workforce

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Public Health Specialist
City of Dubuque, Iowa

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President & CEO
Schmid Innovation Center
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T. 563-557-9049

Thursday, April 7, 2016

Day 3:

Tech and Equity Tracks, Regional Training Center & discussion on Emergency Preparedness Luncheon, and Tour of National Mississippi River Museum & Aquarium

Some of the technical Staff from the city of Dubuque presented different projects targeted towards Climate Change Adaptation.

Capacity, Management, Operations and Maintenance (Public Works): An umbrella unit set up to take care of a gravity flow network of 300 miles of pipe. In the past, the city had only 2 pipes that could not contain the overflow caused by rainwater that was going into the sewer pipes instead of the storm water pipes.

The Fats, Oils & Grease (FOG) program is housed under this unit, as well as the Waste Water Plant or recently branded as the Water Resource Recovery Center.



The city implemented the FOG program due to an EPA Consent Decree established as a result of sanitary sewer management issues presented in the city. The decree signed by the Mayor of Dubuque implied that the Water Management Department is responsible for the city's sanitary sewer pipe collection system and water treatment for Dubuque's restaurants, hospitals, education centers, and anywhere where food is prepared. Grease interceptors are used for compliance, a device collects grease and information for

cleaning frequency. Educational best management practices are also shared with the restaurants and other food venues. The FOG is a program is managed with the cooperation of different departments.

Various strategies were implemented to correct sanitary sewer overflows as the collection system was over 100 years old. Engineers implemented 4 permeable pavers or green allies throughout the city. Pollutants are now treated before being discharged into the environment. The Bee Branch project involves a 3.5 million creek restoration to eliminate flow and infiltration after 75-100 years use of out of ductile iron pipes. 12 sewer sheds were identified by district, and gathered in one sewer for collection and then transfer. Plumbing Detection Methods such as smoke and dye testing are used for finding the type of connection pipe. Sewer shed improvements result in less water in the system allowing plants to treat water easily and reduce costs. It can reduce 2.0 mgd during 2 inch rain event. The **SCADA** (Supervisory Control and Data Acquisition) system is utilized for remote monitoring and control of water flow. It operates with coded signals over communication channels.

In addition, the Catfish Creek Erosion Control Management plans to cover over 46,000 acres and counter to the lack of water filtration and runoff. The city of Dubuque understands that it needs to take control of their aquifers. A Rapid Assessment Stream Corridor has collected survey data on debris, habitat and vegetation. Their Storm water Management Manual will allow water to go back

down through soil filtration and recharge aquifers. This mechanisms result in soil health meaning quality restoration in organic matter. Currently, only 5-10% of organic material is composted. Moreover, stream bank projects utilize native plants to filtrate water further down and sandy subsoil for rain gardens (bio retention cell). The plan Includes policy recommendations.

Social Sustainability: The City of Dubuque has a vision for 2026. An approach that is financially feasible and works to remove barriers and make sure all social groups are included. The Human Rights Department uses Results Based Accountability and Collective Impact as a form of measurement. The department remains flexible and mindful of the community's response.

Inclusive Dubuque: A separate Network of community leaders who advance social justice, equity and community. As a network there is no hierarchical power structure, its backbone is a community foundation, with the help of the city as a partner, and other organizations including school districts. The Network is always asking who is not on the table and wants to make sure that everyone is invited to participate. Inclusive Dubuque focuses on its structure and processes which are to remain participatory and transparent. A chart for Community Engagement Planning was developed.

The Human Rights department has been learning intrinsic processes to support other departments and have a more deliberate and intentional approach. The goal is to not be only reactive based on an emergency or immediate need. As a result, quick guides were developed to encourage citizen online participation and collect data. Moreover, and for evaluation purposes, hard data can help justify investments and policy changes.

Issues/Strategies Discussed:

- Capacity, Management, Operations and Maintenance
- Fats, Oil and Grease (FOG) program
- Water Resource Recovery Center
- Bee Branch Water Shed Restoration Project
- SCADA (Supervisory Control And Data Acquisition)
- Disconnection of storm water - allowing storm water to infiltrate
- EPA 9 elements of watershed plan -100 million to implement
- Water quality testing
- Land Use: Present and future (Smart Plan) 25-30 years. 7,000 acres of agricultural land and gain 5,900 acres of residential use.
- Healing ecosystems by connecting it to itself
- Next 30 years for wetland restoration
- 1.4 million for bee branch, restore ½ session of stream
- cost-share for residents living by watershed
- Guiding principles for community engagement
- Equity and inclusion: Being inclusive while accepting differences
- Peer-learning space: From each other, and through everyone's experiences.
- Community Equity Profile
- Every month once data is gathered, a snapshot is created and published on the local newspaper also on inlusedbp.org
- Network partners are to use data
- Once an equity profile is established, the network breaks into focus groups

- Need to measure
- Barrier: no people at the table

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Friday, April 8, 2016

Day 4:

Policy Track, and Debrief

SOCRATA -Assistant City Manager, Cindy Steinhauser wanted the delegation to have a more clear understanding about the Council-Manager form of government. Delegates coming from abroad are highly interested in this type of governance and need to understand it as a basis for the exchange. The information Services Manager, Chris Kohmann explained the city's open data system, Socrata - used for expenses, budgeting, and measuring performance. The system is used as an easy to access repository. Some additional uses include city goals in terms of infrastructure, and performance measures for air quality. Chris talked about ICMA Insights and its role in the benchmarking of the city with the use of the SAS program for measuring indicators and supporting data.



The 4 STAR (sustainability Tools for Assessing and Rating Communities) Program is implemented with the help of community Partners and it provides the opportunity for innovation: Dubuque came up with the idea of Walkable Neighborhood Schools and was given an extra credit. The city has a 50% of dwelling units that are within $\frac{1}{2}$ mile of a school. Points were additionally earned due to the city's goal for GHG reduction of 50% by 2030; so far there has been an 11% reduction.

Dubuque's Comprehensive Plan update has incorporated Climate data into its process. Waste Minimization programs have been implemented to improve resource conservation. However, there is no current data for amounts collected.

The sustainability coordinator, Cory Burbach wants to focus on creating activities to open the city departments for citizen's questions and promote transparency. The idea is to build relationships with the citizens so they can understand the work that takes place. Moreover, the role of the Sustainability Coordinator is to put systems in place.

After lunch we discussed the climate adaptation priorities for the city of Santiago and how to best utilize the resources and technical aid that can be provided throughout this program and the

CityLinks exchange. More details from the debriefing can be found on annex 1. In addition, a work plan was developed. See annex 2.

Issues/Strategies Discussed:

- Equity and Empowerment
- Innovation - City Life program focuses on ways for how departments can interact with citizens.
- The Path Forward: Working groups for food security
- Funding to address air quality: grants for university students
- Energy use: Looking for unifying number to be measured
- Data to empower citizens
- Standard operating procedures

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Summary:

Day	M/D/Y	Principal subjects.	Topics of interest.
1	04/05/16	• City Manager Presentation. • Lunch, Community Tour • Dinner with Community Partner	- Getting to know more about the city manager figure and its relevance in the local administration. - More extensive knowledge of the partners works in city functioning.
2	04/06/16	• Meeting with Planning Services on Land Use planning and Comprehensive Plan • Public Works Visit • Tour of Watershed Initiatives • Dinner with Sister City Commissioners	- Formulation process of the Land Use Plan. - Alignment of the used instruments (Land Use Plan and comprehensive Plan). - Learning about the Public Works Department. - Knowledge of an urban watershed construction process. Impact on the population and surroundings.

			- Learning about the Commissioners work especially with the Sister City commissioner.
3	04/07/16	• Tech and Equity Tracks, - Regional Training Center & discussion on Emergency Preparedness visit • Tour of National Mississippi River Museum & Aquarium	- Functioning of the emergency entities and civil defense force. - Work system of the regional entities. - The Design a key project to promote a territory of the city.
4	04/08/16	• Policy Track • Debrief	- The importance of citizen participation during planning - Experiences of city manager, useful for work in local government.



TRIP REPORT

City Links Visit: San Pedro de Macorís to Ft. Lauderdale

April 11th – 15th, 2016

INTRODUCTION

The ***International City / County Management Association (ICMA)***, as part of its City Links component under the Planning for Climate Adaptation Program in the Dominican Republic sent a delegation from San Pedro de Macorís to visit the City of Ft. Lauderdale, Florida for the second partnership exchange between those two municipalities. During the week of April 11th, 2016, two City of Fort Lauderdale staff (the staff that had previously visited San Pedro de Macorís), Linda Mia Franco, Urban Design & Planning Principal Planner in the Department of Sustainable Development and Glen Hadwen, Sustainability Manager in the Public Works Department, hosted a delegation of 9 participants from the City of San Pedro de Macorís, ICMA and FEDOMU.

The objective of the City Links Program which initiated in 1997 with funding from USAID is to network officials and senior staff from ICMA's more than 10,000 members to help identify and implement sustainable solutions to local municipal problems. This program is centered on the principle that well-managed cities are the key to the efficient provision of public services, the rational management of resources, economic growth, and political stability and that practitioners are the best suited to share their best practices and experiences. CityLinks Programs often complement existing Sister City Linkages. In this case, Ft. Lauderdale is paired up with La Romana (city next to and east of San Pedro de Macorís) in the Dominican Republic.

The San Pedro de Macorís delegation was comprised of: Mayor Ramon Antonio Echavarría Peguero; General Secretary, Jose Antonio Frias Constanzo; Director of the Office of Land Use Planning, Richard Miller Guillen; Vice President of the Board of Trustees, Nelly Altagracia Pilier de Stapleton; President of the Economic and Social Municipal Council and President of the Chamber of Commerce and Production, Danilo Nicolas Miñoso Díaz; Regional Coordinator for FEDOMU, Miriel Aihanna Mañe de los Santos; Director of Territorial and Environmental Management for FEDOMU, Beatriz Alcantara Colon; ICMA Technical Coordinator, Andrea Isabella Vogel Draiby and ICMA Climate Change Specialist, Alejandro Herrera-Moreno. The Mayor, Ramon Antonio Echevarría, attended the first two days of the exchange and was replaced by the Secretary General, Richard Guillen, on the last two days because of logistics and political agendas in San Pedro de Macorís due to the national elections held on May 16, 2016 in the Dominican Republic.

Tuesday, April 12th, 2016

Day 1:

Welcome Breakfast, Presentations on Adaptation to Climate Change and Citizen Engagement, Ft. Lauderdale Sun Trolley Tour, Visit to Beach Nourishment Area on A1A

The day began with the delegation being taken to City Hall from the Hampton Inn Hotel (within walking distance) and touring around the different departments. Afterwards, we were given a welcome from Lee Feldman, City Manager, and Dr. Nancy Gassman, Assistant Public Works Director and a welcome breakfast at City Hall. Glen Hadwen, Sustainability Manager, then gave a presentation on the City of Ft. Lauderdale followed by the Mayor of San Pedro de Macorís, on the City of San Pedro de Macorís. Andrea Vogel then gave a presentation on the Planning for Climate Change Adaptation Program and City Links. Dr. Gassman

gave a detailed analysis of the issues related to climate change adaptation in the City of Ft. Lauderdale. Aneisha Nicolas, Sustainability Specialist, helped us throughout the day and throughout our whole visit with all the logistics of the trip. The delegation from San Pedro de Macorís and the City officials walked to the Las Olas Boulevard in order to have lunch at the Rock Burger Restaurant. After lunch, we walked back to City Hall to attend a presentation on citizen engagement on the development of the Vision Plan and the impact of Neighborhood Survey results on sustainability initiatives as they relate to the prioritization of the Commission Annual Action Plan (CAAP) Initiatives. This presentation was given by Paula Romo, Acting Structural Innovations Manager. City officials then took the delegation on a Sun Trolley tour through Ft. Lauderdale. We visited different neighborhoods and also went to the Central Beach- Beach Nourishment Project on the A1A Route.

Issues/Strategies Discussed:

We observed 777 Bayshore Drive Stormwater improvements on foot and explanations were given on tidal and storm flooding in the North Beach Village Area, drainage analysis of the existing stormwater conveyance system and the design of tidal check valve improvements. We were provided with a copy of the Central Beach Stormwater Master Plan Map. Adaptation Action Areas (AAAs) were pointed out to us. They are also defined in the Comprehensive Plan and Community Investment Plan. An AAA is a designation in coastal management and an element of a local government's comprehensive plan, which identifies one or more areas that experience coastal flooding due to extreme high tides and storm surge, and that are vulnerable to the related impacts of rising sea levels for the purpose of prioritizing funding for infrastructure needs and adaptation planning. AAAs are designated in Section 163.3164(1) of Florida Statutes. An AAA's purpose is to serve as a vehicle for implementing adaptation strategies by integrating AAAs into existing and future city processes and city-wide plans and documents. This was done in Ft. Lauderdale as the Priority Planning Areas were identified.

Certain rainwater runoff infrastructure was pointed out to us (bioswales) that can recharge the aquifer and be useful in climate change adaptation infrastructure planning. It was important to note that new and renovated commercial/residential buildings in the city need to comply with a particular color palate and design specifications approved by the Planning Department. This provides a sense of community and helps to identify the City and its neighborhoods. Fort Lauderdale personnel explained Zoning Districts and their dynamics. It is also interesting to note that sand used in the beach nourishment project that we visited on Central Beach on A1A needed to be of a specific grade and color (approved by the EPA) and had to come from inland areas to be able to be used in the beach nourishment activities. Our guides were Todd Hiteshew, Environmental Services Manager and Glen Hadwen, Sustainability Manager.



Todd Hiteshew, Environmental Services Manager, explaining zoning areas to the group



Glen Hadwen, Sustainability Manager, explaining the Beach Nourishment Processes to the group



The San Pedro Delegation at Central Beach on A1A



The San Pedro Delegation Sun Trolley in the North Beach Village Area, Explanations from Glen Hadwen

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Wednesday, April 13th, 2016

Day 2:

Presentation of the Key of the City of Ft. Lauderdale/ Governmental Center Presentations/Walking Tour Riverwalk/ Department of Sustainable Development Presentations/ Round Table Discussions

The day began with a walk over to the town hall where Jack P. Seiler, Mayor of Ft. Lauderdale, presented the key to the City of Ft. Lauderdale to Nelly Pilier de Stapleton, Vice President of the Board of Trustees of the City of San Pedro de Macorís. After this, we walked over to the Governmental Center on Andrews Avenue where we started with the first presentation on the collaboration among local municipalities and the Southeast Florida Regional Climate Change Compact (who they are and what they do). Dr. Samantha Danchuk, Assistant Director of the Environmental Protection and Growth Management Department, gave the presentation. Nearly forty percent of sea level rise risk is projected for Florida. There was an urgent need to have a comprehensive climate strategy in place to manage and reduce risks. Hence, the formation of the Compact. The Southeast Florida Regional Climate Change Compact is comprised of 4 counties; Broward, Miami-Dade, Monroe & Palm Beach with 109 municipalities and 5.9 million people. It is also comprised of Boynton Beach, Fort Lauderdale, Key West & Miami Beach, the South Florida Water Management District, the Nature Conservancy – Florida Chapter and the South Florida Regional Planning Council.

The second presentation was on Broward County's Priority Planning Areas in its Land Use Plan. This presentation was given by Dr. Samantha Danchuk as well and centered on different maps showing priority planning areas with regards to sea level rise in particular. The maps were produced by Broward County in partnership with the South Florida Water Management District (SFWMD) and the National Oceanographic and Atmospheric Administration (NOAA).

Issues/Strategies Discussed:

Dr. Samantha Danchuk stressed that the Compact's objectives are to develop a regional voice on state and federal policy, develop and implement a regional Climate Action Plan and meet annually in a Regional Climate Action Summit. It was very interesting to see how different approaches to climate change adaptation

were weighed out between counties for a better regional approach. The Compact is a model on a national level and a great initiative for the improvement of climate change resilience.

Dr. Samantha Danchuk insisted on the importance of Priority Planning Areas within the Ft. Lauderdale Land Use Plan. Priority Planning Areas are key to a climate change adapted land use plan. Mostly, Priority Planning Areas are limited to the coastal communities with land east of the SFWMD's salinity control structures. In other counties or states, Priority Planning Areas may deal more with watersheds or aquifers. The timeline for a two-foot sea level rise on any map is based on the Southeast Florida Regional Climate Change Compact unified sea level rise projection for Southeast Florida. Priority Planning Areas, in this case, are located in Adaptation Action Areas (AAAs).

From 10:45 am to 12:00 pm the delegation took a walking tour of the Riverwalk in Ft. Lauderdale. During this walk along the historic New River, the tour leader Randall Robinson, Urban Design- Planner III, discussed land use planning and how it is interfaced with climate change and sea level rise. The Riverwalk was conceived as a vibrant community with continuous happenings and as a downtown destination to revive the nucleus of Ft. Lauderdale. The Riverwalk itself is managed by a **nonprofit 501(c)(3)** organization with the same name responsible for the **planning, programming, beautification** and **promotion** of Riverwalk Park. The NGO is composed primarily of **volunteer private citizens** and overseen by a board of directors. You can become a member, volunteer or donate to the Riverwalk Organization. The area has a regional park designation from Broward County. The walking tour was very picturesque with great views of downtown Ft. Lauderdale and there are 4 major installations of art along it.

In the afternoon, the delegation had two presentations in the Department of Sustainable Development. The first one was on Fort Lauderdale's land use, zoning and comprehensive planning given by three presenters; Ella Parker, Urban Design & Development Manager, Anthony Gregory Fajardo, Zoning Administrator and Linda Mia Franco, Urban Design- Principal Planner. The presenters explained the legal framework for comprehensive planning on a federal, regional and local level and described how regulations are enforced. The second presentation was on Code Enforcement and Building Permitting Process. Sharon Ragoonan, Community Inspections Manager, and Victor Blanco, Interim Assistant Building Administrator presented the City of Ft. Lauderdale website on building permitting processes which is designed for the average user or contractor to understand including explanations on permitting forms and fees. There is a Code Compliance Division for the City of Ft. Lauderdale within the Department of Sustainable Development. The presenters shared forms and notices that are put up on Ft. Lauderdale homes and businesses that are not code compliant. The division works seven days a week to help property owners meet their obligations and responsibilities, and to prevent property values from falling. The standards set by the Code of Ordinances protect all residents from substandard conditions.

Issues/Strategies Discussed:

After the afternoon presentations a Round Table Discussion with the San Pedro Delegation was held at the Department of Sustainable Development in which we discussed the day's activities and presentations. The Riverwalk was seen as something that could be tried out in San Pedro with the Coalicion Higuamo and the town hall. The idea would be to turn areas around the Higuamo River into recreational areas and buffer zones for flooding events. The logistics behind the planning would be complex and would have to be well thought out. The Building Permitting and Code Compliance Processes that were presented provide good input into the development of a model to be adapted to San Pedro de Macorís which would not include the complexity and diversity of regulations found in Fort Lauderdale. Priority Planning Areas and Adaptation Action Areas are good mechanisms and ideas to pinpoint critical vulnerable areas in San Pedro de Macorís. This would be worthwhile to include in part of the mapping of the climate change adapted land use plan for San Pedro de Macorís.



Jack P. Seiler, Mayor of Ft. Lauderdale presenting the Key of Ft. Lauderdale to Nelly Stapleton, Vice President of the Board of Trustees of the City of San Pedro de Macorís



Presentations to the San Pedro Delegation by Nancy Schneider and Dr. Danchuck



River Walk Promenade



Mosaic Park Posts

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Anthony Gregory Fajardo, Zoning Administrator

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Joe Pasquariello, Structural Plans Examiner, JPasquariello@fortlauderdale.gov

Thursday, April 14th, 2016

Day 3:

Presentation at South Florida Water Management District (SFWMD)/ Tour of the SFWMD Pump Station/Airboat Tour of the Everglades/3 Presentations at City Hall

In the morning, the delegation traveled to the South Florida Water Management District (SFWMD) where Lorraine Myers, Intergovernmental & Outreach Representative, presented the role of the SFWMD and flood control among the many waterways of Ft. Lauderdale and Southern Florida. The South Florida Water Management District is a regional governmental agency that manages the water resources in the southern part of the state. It is the oldest and largest of the state's five water management districts. Its mission is to manage and protect water resources of the region by balancing and improving flood control, water supply, water

quality and natural systems. SFWMD also works on an Everglades Restoration Project with equalization basins and water resource evaluation within basins (natural water flow of Southern Florida and the Everglades has been disturbed and engineered into huge water basins). Many of the waterways were built by the Army Corps of Engineers in the 1930's in areas that were actually part of the Everglades originally. There are almost 1,800 canals in the Southern Florida Area! It was also very interesting to hear alligator control and about invasive species control (in particular about Burmese pythons in the area). We then drove to the SFWMD S-9 pump station which is next to the Everglades Holiday Park. S-9 is one of 71 pump stations in the regional system that serves 8.1 million residents from Orlando to the Florida Keys. S-9 serves as flood control in one of the 2 major basins; 42,230-Acre Basin: Westin, Southwest Ranches and Miramar via the C-11 Canal west, in conjunction with the S-13 regional giant Pump Station. S-9 was built in the 50s as were the others. We were given a tour of the pump station and given a short explanation of its machinery and function by Randy Smith, a technician, who was at the pump station to greet us.

After the pump station tour, the delegation went on a mid-day Everglades Airboat Tour. This was enjoyed by all members of the San Pedro de Macorís Delegation. The Everglades National Park only protects the southern 20 percent of the total Everglades. The guide explained that it has been declared an International Biosphere Reserve, a World Heritage Site, and a Wetland of International Importance; one of only three locations in the world to appear on all three lists. The Everglades is not a swamp, but a very slow moving river of grass. The majority of South Florida's fresh water, which is stored in the Biscayne Aquifer, is recharged in the park. The guide stopped many times during the tour to point out the local flora and fauna. There were plans in 1882 to actually drain the wetlands in their totality but the Army Corps of Engineers did not succeed in draining the vast majority. The delegation encountered many sloughs (or deeper water areas where alligators hung out) as well as marl prairies (or shallow water areas with a particular type of grass from the Everglades). It was also interesting to find out that panthers live in the Everglades in the drier areas and islands. At the end of the tour the delegation watched the Alligator Show and had lunch at the Everglades Holiday Park. Some of the participants were pleasantly surprised by how good alligator tasted- as it was part of the lunch menu!

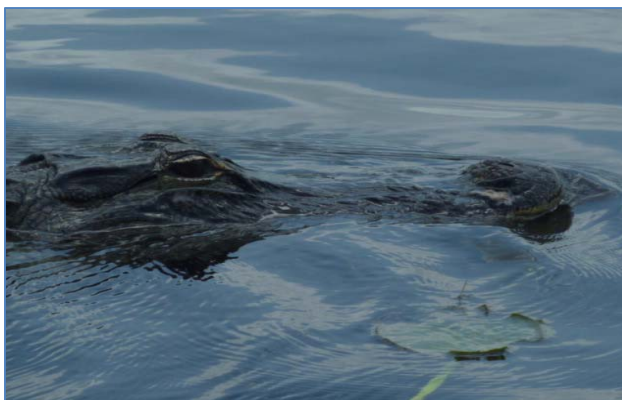
In the afternoon, we went back to City Hall for three presentations; Utilizing Stormwater Systems to Preserve Infrastructure by Annalise Mannix, Senior Project Manager; Stormwater Engineering by Elkin Diaz, Senior Project Manager in Engineering and Staff Capacity by Dr. Nancy Gassman and Glen Hadwen. In the first presentation the delegation learned about what makes Southeast Florida vulnerable (physical characteristics); the fact that it is a peninsula, low-lying, it has dense coastal development (with around 6 million people), it has a shallow aquifer through which water moves easily and it is generally substantially shaped by water. Thirty percent of Broward County's total area that is less than 4 feet above mean sea level

Issues/Strategies Discussed:

After the afternoon presentations we had a Round Table Discussion with the San Pedro Delegation at the City Hall where we discussed the day's activities and presentations. We agreed that climate trends and predictions for Southeast Florida and Ft. Lauderdale are very similar to Climate trends and predictions for San Pedro de Macorís; sea level rise (2.5-6.0 feet by 2100), rising temperatures (2-10 degrees F by 2100), extreme rainfall, drought, coastal and inland flooding, increased storm intensity, beach erosion, saltwater intrusion and ocean acidification. Regional problems require regional solutions. It would be great to have a sort of Compact in the Dominican Republic that could provide a platform for policy and advocacy, a network and become a regional resource and a model of governance.



Example of the skin of a Burmese Python found by SFWMD



Alligator in the Everglades



Everglades Airboat Tour



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Friday, April 15th, 2016

Day 4:

Tour of the Wheelabrator- Waste to Energy Plant/ Presentations on GIS and the San Pedro de Macoris Vulnerability Assessment/ Round Table Discussion with City Staff/Debrief

On the last day of our visit, we visited the Wheelabrator- Waste to Energy Plant. We were guided by city and Wheelabrator staff. The Wheelabrator provides dependable, environmentally safe disposal of municipal solid waste (MSW) for Broward County, Florida, while generating clean and renewable electricity. The facility processes up to 2,250 tons per day and has an electric generating capacity of 66 megawatts; the equivalent of supplying the electrical needs of 39,000 South Florida homes! The Wheelabrator makes renewable and clean energy from waste. The waste is unloaded from trucks into concrete pits and then it is transferred to a boiler where temperatures exceed 2,000 Degrees F! The large utility-type boilers are designed to recover thermal energy in the form of high pressure steam that is converted into electrical energy in the turbine-generator. With access to existing steam distribution lines, energy-from-waste facilities can produce and sell both steam and electricity. After the trash is completely processed, ferrous metals are separated from the ash residue for recycling and the overall volume of incoming trash is reduced by more than 90 percent. The Wheelabrator has been functioning and engaged in the community for more than 20 years and they have 15 energy-to-waste facilities, four independent power-producing facilities, four ash monofills and three waste transfer stations across the country. For more information: www.wtienergy.com.

After the Wheelabrator Tour we went back to City Hall for a presentation on GIS for vulnerability assessments given by David Ruben, GIS Analyst. The delegation compared the GIS data that the Planning for Climate Adaptation Program used for its vulnerability assessment for San Pedro de Macorís with data sets and methodologies used by Ft. Lauderdale for their vulnerability assessment. Clearly, there is a lot more data available to Ft. Lauderdale than there is to San Pedro de Macorís through NOAA platforms and others. Jose Antonio Frias, General Secretary of San Pedro de Macorís, then gave a presentation on the vulnerability assessment carried out with support from Alejandro Herrera, the Program's Climate Change Specialist, and ICF.

Issues/Strategies Discussed:

After lunch we had a Round Table Discussion with City Staff about the next steps in our City Links Exchange. There are four technical trips planned and we discussed what could be the focus of these trips. The delegation suggested six possible focus areas: 1) Land Use Planning Mechanisms; 2) Flood Control and possible engineering solutions (bioswales, permeable pavements and lower green areas in between streets); 3) GIS training (Digital Shoreline Analysis Tool from NOAA); 4) Beach Nourishment (possible study and suggestions for El Faro Beach); 5) Historic Building Restoration (possible help with mechanisms of obtaining funding and expertise from UNESCO); 6) Solid Waste Management (small local solutions for trash management vs. a Wheelabrator- type plant which would be very difficult in San Pedro de Macorís-). These topics were discussed more in detail during the Debrief with City Hall Staff and the delegation (see below).



San Pedro Delegation at the Wheelabrator



San Pedro Delegation touring the Wheelabrator



End of the Visit with City Staff



Jose Antonio Frias Presentation

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Summary of Visit

Day	Date	Principal subjects.	Topics of interest.
1	04/12/16	• Presentations from City Management and from ICMA • Lunch at Rock Burger, Sun Trolley • Tour of Central Beach Area • Beach Nourishment Project at Central Beach	- Getting to know more about city staff and their roles - Learning about Ft. Lauderdale's Adaptation to Climate Change, Citizen Engagement Processes and Vision Plan. - Knowledge about Ft. Lauderdale areas, zoning, building codes, beach nourishment and sustainability initiatives
2	04/13/16	• Learning about the Southeast Florida Regional Climate Change Compact • Meeting with Planning Services on Land Use planning and Comprehensive Plan • Tour of Riverwalk • Lunch at Chimney House	- Learning about collaboration among local municipalities - Formulation process of the Land Use Plan. - Alignment of the used instruments (Land Use Plan and comprehensive Plan). - Learning about the Environmental Protection and Growth Department - Learning about the Department of Sustainable Development - Learning about Code Enforcement and Building Permitting Processes
3	04/14/16	• Learning about the South Florida Water Management District (SFWMD) • Tour of Pump Station S-9 • Airboat Tour of the Everglades • Meeting and Presentation with Stormwater Engineers and Project Managers	- Functioning of flood control, canals, invasive species control and restoration of the Everglades - Experiencing the Everglades in a unique way - Learning about Stormwater Systems, Stormwater Engineering and Staff Capacity.
4	04/15/16	• Tour of Wheelabrator • Learning about GIS and Vulnerability Assessments • Round Table Discussion with City Staff about trip • Debrief	- The mechanics of the Wheelabrator plant and waste to energy processes - GIS tools and methodologies used for vulnerability assessments - Discussions on future Technical Visits to San Pedro de Macorís

Debrief Discussion Summary

Strategy for Short-Term and Long-Term Continuation of the City Links Partnership

Short Term:

- Presentation of Trip Report and Tentative next steps for technical visits to the City of Ft. Lauderdale
- Formal twinning agreement between Ft. Lauderdale and San Pedro de Macorís (SPM) through City Links
- Begin planning technical visits with Ft. Lauderdale staff and SPM staff

Mid Term:

- Land use planning mechanisms for Technical Visit 1: possibility of integrating informal settlements and rehabilitation of Higuamo River banks into climate change adapted land use plan in a better way through designation of recreational areas, relocation. Involve the private sector and Coalicion Rio.
- Flood and stormwater solutions for SPM: speak to working group and the technical team about possible engineering solutions in preparation for Technical Visit 2
- Coastal zone management and beach nourishment in the SPM municipality (Guayacanes is losing a lot of beach through erosion): involve the private sector in the preparation for Technical Visit 3; try to evaluate local areas in anticipation of visit and collect information
- Make headway in the demarcation of the historic district, identification of priority areas to be restored and formulation of a general plan in anticipation of Technical Visit 3. Involve the technical team and working group. Involve the private sector. Look into possible UNESCO funding mechanisms.
- Involve Alfred Battle, Deputy Director of Sustainability Department, in technical visits. He expressed particular enthusiastic interest in visiting the Dominican Republic and helping with our initiative.

Long Term:

- Look into better mechanisms for solid waste management for the municipality. The Wheelabrator is a good example, but it is too large scale and expensive for San Pedro de Macorís and not realistically implementable- but possibly a smaller scale waste to energy solution could be researched
- Long term training on GIS and Land Use Planning for municipal staff

Annex D - List of Sub-awards

Organization	Dates (start/end)	Objective
FEDOMU	April 29, 2015- December 31, 2018	FEDOMU will support program implementation during the first two years, with one full time FEDOMU staff inserted in each of the target municipalities and additional FEDOMU staff support. ICMA will work to strengthen FEDOMU's institutional capacity to lead the Program's technical implementation during years 3 and 4, as well as replicate the methodologies in other municipalities after project ends.
INTEC	March 18, 2015- March 18, 2018	INTEC will help nurture a pool of expert planners, climate change specialists, and municipal staff by providing training via university certificate courses and technical sessions. INTEC will promote the establishment of new research areas that focus on climate change adaptation and municipal planning. INTEC's gender expert will promote gender awareness among municipal and project staff, as well as other project stakeholders.
ICF	March 18, 2015-December 31, 2018	ICF International will provide technical assistance in climate change vulnerability assessments, adaptation planning and adaptive management.
ATKINS	September 30, 2015-June 30, 2016	Atkins assisted in assessing climate vulnerabilities and collected information for their Future Proofing Cities report card to two of the project cities (Las Terrenas and San Pedro de Macoris).
I2UD	October 1, 2015 – July 31, 2016	I2UD assisted with community and stakeholder engagement including; awareness raising related to climate change and identified opportunities and models for engaging the private sector
PUCMM	July 1, 2016-November 3, 2016	PUCMM will assist with a socio-economic analysis of the territory including database and maps synthesis for the municipalities of San Pedro de Macoris, Las Terrenas and National District
APA	August 10, 2016- April 17, 2017	APA will support the development of the INTEC Diplomado on land-use planning, provide support to the implementation of key steps in the PMOT Guide and provide guidance on the creation of a network and community of practice.