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PLANNING FOR CLIMATE ADAPTATION PROGRAM

Quarterly Report
October to December 2015

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By the

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and its partners:

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USAID/ICMA Planning for Climate Adaptation Program

USAID Quarterly Report III

October – December 2015

Table of Contents

List of Acronyms

LIST OF ACRONYMS	4
Executive Summary	7
I. Program Highlights for the Quarter	7
II. Major Accomplishments/Progress towards Results by Component	9
IV. Outstanding Issues/Challenges and Remedial Actions Taken	26
V. Planned Performance Objectives/Proposed Activities for next quarter	27
VI. Upcoming events	28
VII. Environmental compliance	28
VIII. Financial Summary and Expenditure Projection Error! Bookmark not defined.	
IX. Progress on Performance Monitoring Plan (PMP).....	28
Annex A - Performance Indicators Summary.....	29
Annex B: Future Proofing Cities Tool Factsheet	32
Annex C – Municipal Land Use Planning Guide.....	35
Annex C – Fort Lauderdale Trip Report	36
Annex E: Fort Lauderdale Trip Report	46

LIST OF ACRONYMS

ADN	Ayuntamiento del Distrito Nacional (National District City Hall)
AMET	Metropolitan Transportation Authority
AMUPREV	USAID/ICMA Municipal Alliance for Prevention of Violence in Central America
APEDI	Association for Development Incorporated
APROCOVICI	Dominican Association of Home Builders and Promoters
ASOMURECIN	Association of Municipalities of the North Cibao Region
CAASD	Santo Domingo's Aqueducts and Sewage Corporation
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
CDEE	Dominican Corporation of State Electric Services
CDES	Santiago's Economic Development Council
CEUR	PUCMM Urban and Regional Studies Center
CLIMA	Ciudades Líderes en Iniciativas y Metas de Adaptación (Leading Cities in Adaption Initiatives and Goals)
CNCCMDL	National Council on Climate Change and Clean Development Mechanism
COPADEBA	Committee for the Defense of Neighborhood Rights
CODIA	Dominican School of Engineers, Architects and Surveyors
CORASAAN	Santiago's Potable Water and Sewage System Corporation
CRIS	Climate Risk Infrastructure Services Program
DGODT	General Directorate of Land Use Planning and Development
DIGEPEP	General Directorate of Special Programs
FUCOSAGUSCIGUA	Community Environmental Sanitary Foundation of Los Guandules, La Ciénaga, Guachupita y 27 de febrero
27	
FUNDASURZA	Environmental Sanitation Foundation of La Surza
GIS	Geographic Information System
GIZ	German Agency for International Cooperation

GPS	Global Positioning System
I2UD	Institute for International Urban Development
INDOTEL	Dominican Telecommunications Institute
INDRHI	National Institute for Hydraulic Resources
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
FUNDOGER	Dominican Risk Management Foundation
LGBT	Lesbian, Gay, Bisexual and Transgender
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
ODETCA	Land Use Planning and Sustainable Development in Central America and the Dominican Republic Project/SISCA
ONAMET	National Meteorological Office
ONESEVIE	National Office of Seismic and Infrastructure Evaluations
OTTT	Land Transportation Technical Office
PES	Santiago's Strategic Plan
PMP	Performance Monitoring Plan
PRODEM	Municipal Development Project
PUCMM	Pontifical University Mother and Teacher
RAUDO	National Network of Universities for the Environment
SOECI	Ecological Society of the Cibao Region
SISCA	Central America Social Integration Secretariat
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

Executive Summary

The USAID/ICMA Planning for Climate Adaptation staff was able to introduce the Program's methodology for incorporating climate change adaptation to the land use planning processes in all four target municipalities. Important progress was made in achieving the political buy-in in each municipality, engaging local municipal staff and establishing team enthusiasm and commitment to reach program objectives.

The October to December 2015 reporting period is characterized by the establishment of common ground among municipalities, stakeholders, resource partners and other USAID Dominican Republic climate change initiatives. Relationships established among municipal high level decision makers and staff, FEDOMU and ICMA staff have paved the way for the successful implementation of Program initiatives.

ICMA fostered open dialogue, inter-institutional collaboration and public participation through the formation of technical teams and working groups in each municipality to set the stage for the land use planning process. The collection of key baseline data for the assessment of each municipality's climate change vulnerabilities fostered discussions among municipal staff and key stakeholders in each territory. This process also promoted critical thinking and analysis with respect to climate change issues, leading to enhanced institutional capacity to assess and address these issues.

ICMA and its partners held several trainings during this Quarter for various stakeholders, including municipal staff and officials, national-level representatives, and the Program team. The trainings were well received. They consisted of hands-on workshops conducted by ICMA and ICF staff and certificate courses given by INTEC. These will continue throughout the Program in order to strengthen institutional capacity in climate change adaptation and planning and create a critical mass of individuals of all disciplines and sectors who can continue to promote the Program's objectives after its completion. Participants in the trainings showed great interest and involvement and provided positive feedback with respect to the relevance of the trainings to their work and the work of their respective institutions.

ICMA worked closely with FEDOMU's municipal coordinators and key administrative staff to engage them directly in the implementation of the Program in each municipality. ICMA has put forth an effort to promote close coordination with local and international partners in order to maximize and leverage Program results. We continue to be focused on providing technical assistance based on an assessment of local conditions and knowledge/capacity.

I. Program Highlights for the Quarter

- Established the municipal technical team in Las Terrenas. This team serves as the executive nucleus for the working group and technical coordination units within the municipality.

- Working group members in Las Terrenas were identified and a space for dialogue was created amongst stakeholders with key roles to play in climate change adaptation at the municipal level.
- Working group members in Santiago were identified and initial meeting was held.
- Working group members in the National District were identified and the initial meeting was held.
 - More than 60 people, representing over 30 different organizations, including CBOs, NGOs, private sector and central government institutions, participated in the first meeting of the ADN Working Group, held in Santo Domingo on November 17th.
- The Las Terrenas municipality stakeholder mapping process was completed (identified key, primary and secondary actors¹). San Pedro and Las Terrenas working groups were engaged in vulnerability assessment workshops.
- A Training of Trainers (TOT) workshop on “Integrating Vulnerability Assessments into the Land Use Planning Process” for officials from FEDOMU, DGODT/MEPyD, Ministry of Environment, INTEC and the Third National Communication of the UN Framework Convention on Climate Change staff was conducted by ICF International.
- Visit from I2UD resource partner organization representative, Oriol Montfort, conducted to identify practical methods of inclusive development for vulnerable communities in unison with Program initiatives.
- Met with civil society organizations in Las Terrenas to begin engaging them in the participatory land use planning processes.
- A visit from representatives of resource partner organization, ATKINS Global, to assess San Pedro de Macorís and Las Terrenas vulnerabilities and collect data to input into pilot Future Proofing Cities Report Cards for both municipalities to complement Program initiatives for the prioritization of climate change actions.
- Assisted the DGODT/MEPyD in the completion of a climate change inclusive guide for municipal land use planning for municipalities of the Dominican Republic, in collaboration with GIZ and UNDP.
- Initiated Technical Course in Municipal Management and Community Participation in Land Use Planning at INTEC.
- Continued Technical Course in Climate Change Adaptation at INTEC
- Participated in the III Conference of Green Municipalities organized by FEDOMU and others in Bavaro/ Punta Cana.
- Participated in the USDA/USFS I-Tree workshop in San Juan, Puerto Rico at the University of San Juan Rio Piedras Campus.

¹ Using the *Capacity Works* Methodology, Program staff conducted stakeholders mapping at each municipality. It identifies and graphs the key actors and their relationship while providing an overall view of the different players, and an initial assessment of their influence in each territory. This important process helps identify relationships, partnerships and problematic situations amongst stakeholders. Stakeholder mapping, therefore, serves as a discussion tool for strategic planning of Program interventions at the municipal level. Three types of actors at the municipal level were identified: secondary, primary and key actors. The secondary actors are those that will only participate in an indirect or temporary manner in the established process. The primary actors are those directly affected by the process (either as beneficiaries, players that aim to increase their influence and privileges, others that will see them reduced or those negatively affected by the processes). The key actors/stakeholders are the people or institutions that can significantly influence the process established due to their capacity, resources, knowledge or position of power.

- Carried out CityLinks exchanges between San Pedro de Macorís municipal staff and officials from the City of Fort Lauderdale, Florida.
- Carried out CityLinks exchanges between Santiago municipal staff and officials from the City of Dubuque, Iowa.
- Conducted a Climate Change Adaptation and Gender Awareness meeting with the Núcleo de Apoyo a la Mujer (Women’s Core Support Group) in Santiago.
- Coordinated USAID Ciudades Líderes en Iniciativas y Metas de Adaptación (CLIMA) partners to meet and find synergies amongst the climate change adaptation programs currently being implemented.
- Closely coordinated activities with the INTEC Improved Climate Information Program and its partners CCNY and FHI360.
- Integrated FEDOMU municipal technicians and administrative staff into the implementation of the first year work plan and the planning of second year activities.

II. Major Accomplishments/Progress towards Results by Component

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

Program activities under this component strengthen the capacity of the municipal staff to include climate change adaptation in municipal planning processes. ICMA continued to advance during this quarter in assessing municipalities’ current needs and capacities.

Assess the Capacity and Needs of the Target Municipality

Program staff continued to strengthen technical and management capacity at the municipal level and during this reporting period focused on the last two steps of the empowerment process/methodology identified by the Program’s Municipal Planning Specialist, Erick Dorrejo.

1. Hold meetings to achieve political buy-in by the municipal mayors and key personnel (key stakeholders).
2. Hold institutional empowerment workshops in each municipality to engage elected officials and staff from the beginning and involve them in urban planning inclusive of climate change adaptation.
3. Present the Program’s work plan to familiarize local stakeholders and municipal staff with the Program’s objectives and proposed activities.
4. Create a municipal technical team comprised of municipal staff and other key stakeholders. Smaller than the working group, this team will serve as an executive committee and technical coordination unit within the municipality. Evaluate municipal capacities (through a series of tools designed by Program staff).
- 5. Map stakeholders and identify working group members.**

6. Establish the working group, engage the technical team and working group in project implementation, and follow up.

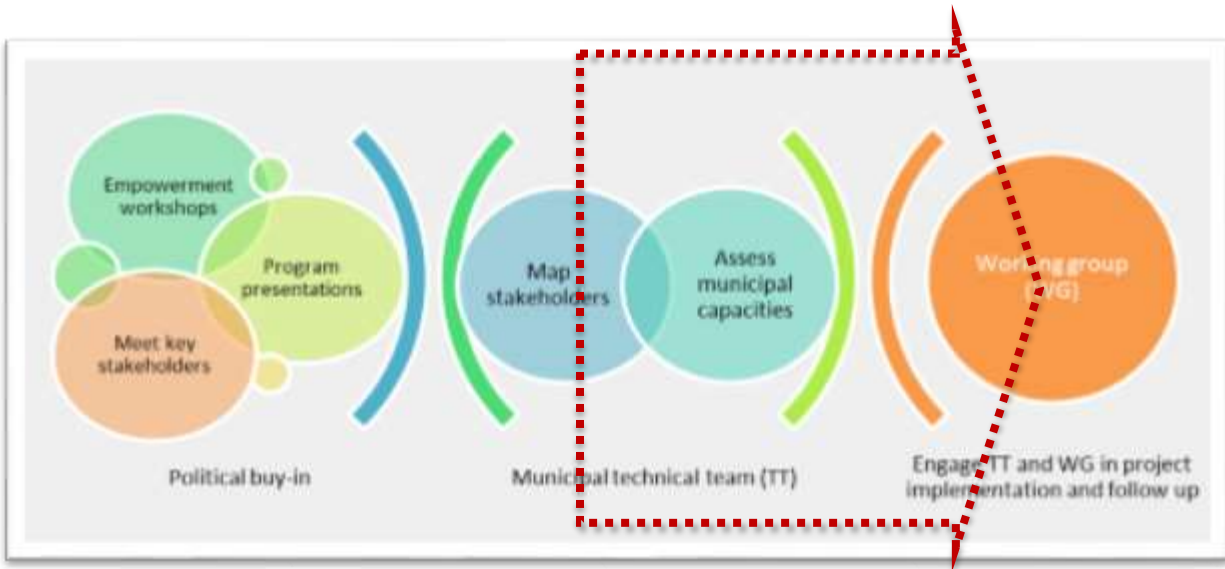


Figure 1: Local engagement process – progress during reporting period

To complete the municipal empowerment process, Program staff continued the **stakeholders mapping** process and combined these processes with the recommendations of the municipal land use planning guide. ICMA - FEDOMU staff have conducted interviews with relevant organizations in Las Terrenas and the National District and have identified key, primary and secondary stakeholders. Furthermore, using the Capacity Works Methodology, their roles and level of engagement in CCA including municipal planning, among other relevant information was discussed. The San Pedro de Macorís and Santiago stakeholder mapping processes were completed during the last reporting period.



Figure 2: ADN and Program staff working on the stakeholder mapping for the National District

In the **National District**, key stakeholders identified were (listed in order of importance):

National District Municipality

National Council for Climate Change and Clean Development Mechanism (CNCCMDL)

DGODT/Ministry of Economy, Planning and Development (MEPyD)

National Meteorology Office (ONAMET)

Ministry of Environment and Natural Resources

Santo Domingo Aqueducts and Sewer Corporation(CAASD)

Ministry of Public Works and Communications (MOPC)

National Geological Service (SGN)

On November 17th, the ADN's first working group meeting was held at the main City Hall in the National District of Santo Domingo. This meeting was aimed at building capacity to elaborate municipal land use plans inclusive of climate change adaptation. The National District assembled important internal and external actors to exchange information in regards to this subject matter. Jose Miguel Martinez, Environmental Secretary, gave opening remarks at the workshop and was actively involved in the exchange of information and group dynamics. Indhira De Jesus, Program Director, presented the Program objectives and mission to develop the city's land use plan. Mrs. De Jesus also presented an introduction to climate change and its importance in land use planning. Angélica Álvarez and Annabel Hiraldo, members of the National District's technical team, presented the methodological framework for the National District's land use planning.

Ana Pou, Manager of Risk Prevention and Reduction, presented the methodology, structure and organization of the National District's working group. She explained the objective of the group and its interactions. . Sixty-five (65) people representing a total of 34 institutions participated in this meeting. Attending institutions included the following: MOPC, SGN, Ministry of the Environment, DIGEPEP, CDEEE, INDOTEL, MINERD, MITUR, Ministry of Agriculture, ONAMET, OTTT, AMET, National Police, Civil Defense, the Escoba Foundation, FUCOSAGUSCIGUA 27, FUNDSAZURZA, FUNSACO, FUNDEMAPU, Neighborhood Associations, IDDI and INTEC.

As part of the ADN working group activation workshop, Erick Dorrejo, the Program's Municipal Planning Specialist led workshop participants in an interactive team session to map out the municipal context of the National District's territory. Participants were organized to work in one of 5 themes: Governance, society, territory, economy and environment. Each group used maps to "draw" the municipal context as seen from the perspective of their respective theme. The resulting maps will be part of the territorial diagnostic phase in the development of the land use plan for the National District. For the purpose of municipal land use planning, municipal context² are all those

² **Municipal Context:** 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. 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) What are the elements of the natural environment located in the surrounding territories and linked to the municipality? (4) What and where are the access ways to the municipality? (5) What is the surrounding infrastructure which influences the municipality (Potable water and sewage system, roadways and transportation -ports, airports-, energy, solid waste disposition sites, supply (markets, supply centers),

aspects, like infrastructure, natural resources, economic relationships, and others that influence or condition municipal development, but that occur outside the municipal borders.



Figure 3: Working group members identifying the municipal context

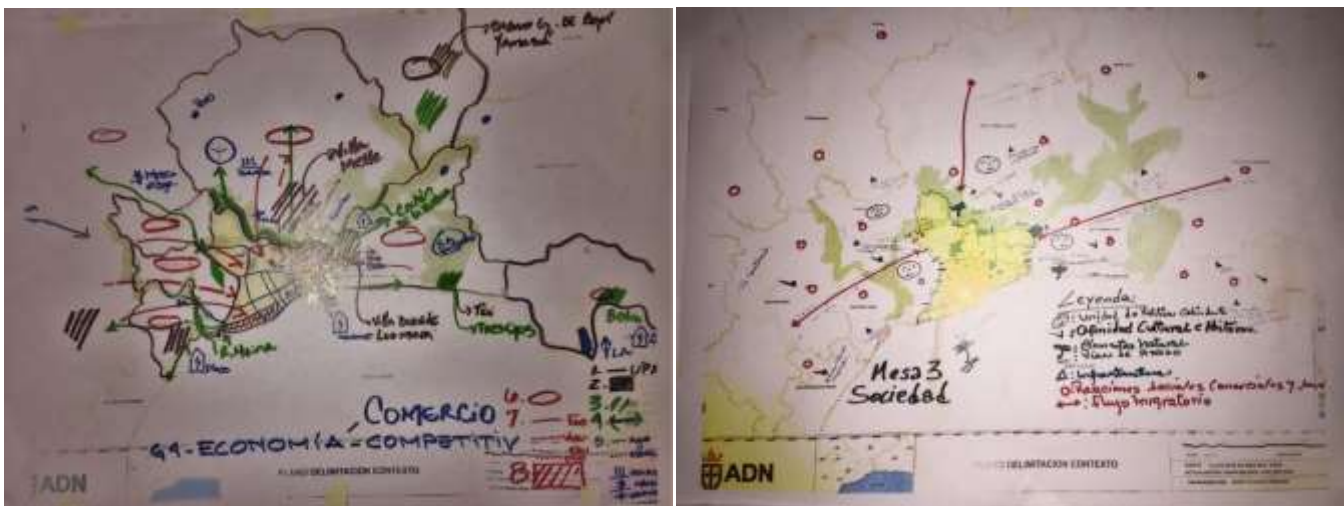


Figure 4: Two of the maps resulting from the ADN municipal context exercise

In **Las Terrenas**, the key stakeholders identified were as follows: (listed in order of importance):

education/health, recreation centers); (6) With which human settlements and/or cities does the municipality have 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 the context which influence the municipal territory's vulnerability?

- Las Terrenas Municipality
- Ministry of Environment and Natural Resources
- Ministry of Public Works and Communications (MOPC)
- Ministry of Tourism (MITUR)
- National Institute of Potable Water and Sewage Systems (INAPA)
- Dominican Federation of Municipalities (FEDOMU)
- Emergency Operations Center (COE)
- Samaná Tourism Cluster
- Neighborhood Associations
- United States Agency for International Development (USAID)
- Lourdes Russa, independent Consultant

In an interactive session held on November 5th, ICMA’s Municipal Planning Specialist, Erick Dorrejo, engaged different institutions in the first working group meeting in **Las Terrenas**. The meeting served as an opportunity to formalize the Las Terrenas Working Group with local members from the Ministry of the Environment, Ministry of Tourism, National Emergency Commission (CNE), local Water Authority (INAPA), members of different neighborhood associations, hotel representatives and other members of the local community. Members from our program implementation partner, ICF, were also present and actively involved in engaging the audience in climate change vulnerability assessment discussions along with Alejandro Herrera, Program Climate Change Specialist and Andrea Vogel, Program Technical Coordinator. A team of expert engineers from our resource partner Atkins also participated in this event while in-country on a reconnaissance trip. At the end of the workshop, all participants engaged in a conversation identifying different climate change aspects of the territory. Mayor Marianna Vanderhorst participated in this last exchange of information, observations and brainstorming session on Las Terrenas vulnerability issues.



Figure 5: Mariana Vanderhorst, Las Terrenas Mayor, addressing the importance of inter institutional dialogue

In **Santiago**, the key stakeholders were identified during the last reporting period and during this quarter the working group was activated. On November 25th, Santiago's Working Group met for the first time. During the meeting, Erick Dorrejo, Municipal Planning Specialist, presented the program objectives and methodology and explained the role of the working groups. The mayor welcomed the members of the working group and introduced the municipality's goals regarding resilience and climate change adaptation. Santiago is the only one of the project's municipalities that already has a municipal land use plan. Therefore, the process has been adapted to their reality and needs. Santiago's POT is up for revision according to its own enacting regulations. The program will facilitate this revision, using the same participatory process we are following in all municipalities -based on the working group's meetings, incorporating climate change adaptation and following the steps of DGODT's PMOT Guide-.

Program staff, in agreement with the Santiago technical team, is collecting the existing data and inputs to the land use plan and consolidating them into one consultation document to socialize with the public at large. During the first working group meeting, the Program's Climate Change Specialist presented the basic concepts of climate change and climate change adaptation. The technical team (FEDOMU, CDES, the municipality and ICMA staff) facilitated group exercises to identify the critical issues for incorporation of CCA into the land use plan and the mapping of the municipal context.

All four project municipalities now have an active working group.

During this quarter, the ICMA – FEDOMU staff also continued to **assess the technical capacity of municipal staff and analytical resources** with regards to land use and infrastructure planning. This process will be completed with the presentation of the capacity assessment report which is in the process of being reviewed and should be finished in the upcoming period.

Improve the Capacity to Request, Analyze, and Apply Appropriate Climate and Weather Information to Decision-Making and Operational Processes

In order to complete the **vulnerability and adaptation assessment of each municipality**, Climate Change Specialist, Alejandro Herrera, made significant progress in engaging local municipal staff in a team effort to assess the vulnerability of each territory. The territory's vulnerability assessments, team workshops and data collection have been closely organized with the ICF International team members: Michael Savonis, Fellow; Joanne Potter, Principal; Molly Hellmuth, Manager; and Angela Wong.

The ICMA team met with the working group members of **San Pedro de Macorís** and engaged them in a scoping exercise of the municipality's vulnerability. The group exchanged knowledge and assessed different aspects of climate change adaptation options, SPM development goals and the aspects that should be taken into consideration while conducting a vulnerability assessment. Alejandro Herrera, presented the methodology and facilitated a group exercise in which the participants used maps of the municipality to identify and characterize vulnerable areas. This one-day workshop, held on Thursday, October 29th, was an important space for dialogue amongst municipal department managers, key personnel and all technical Program staff.

Figure 6: Members of the SPM Working Group actively analyze climate change vulnerabilities

On November 26th, the second meeting of the **Las Terrenas** working group was held in order to elaborate on climate vulnerability at the municipal level. Alejandro Herrera, led the Las Terrenas working group in a vulnerability assessment working session. The group used maps of the municipality to validate the flood map (elaborated previously during a field activity with the City Hall and local communities) and to identify and characterize vulnerable areas.

The **National District's** technical team (directors from planning and environmental departments along with ICMA staff) met to follow up on the ADN's first working group meeting on November 17th. The team also began discussions on the integration of climate change vulnerability into the ADN's land use planning process. The Program's Climate Change Specialist, began vulnerability assessment discussions with ADN's technical team. The Program's Municipal Planning Specialist led this work session and motivated the team for the preparation of the work plan for the following months.

ATKINS Reconnaissance Trip to Las Terrenas and San Pedro de Macorís. Members from our resource partner Atkins visited the municipalities of San Pedro de Macorís and Las Terrenas to meet with municipal personnel from November 1st through 5th. They assessed the territories' climate change vulnerabilities, collected data, identified gaps and action items in conjunction with ICMA and IFC international staff. The team also met with the following institutions, groups and individuals accompanied by the Program's Technical Coordinator, Andrea Vogel:

- a. Australia Ramirez and Yenny Rodrigues, Geological Service (SGN)
- b. Juan Arias, Oficina Nacional de Estadísticas, ONE (Statistics Office)

- c. Juana Sille, ONAMET
- d. Met with the Working Group in Las Terrenas and participated in a Reconnaissance Trip of Las Terrenas together with ICF (visited the coastal areas, resorts, residential, impoverished and commercial land use areas to identify vulnerabilities).
- e. Met with San Pedro de Macorís' Technical team and participated in a Reconnaissance Trip of San Pedro de Macorís to identify vulnerabilities.

This Reconnaissance Trip allowed the Atkins team to fine-tune the scope of the work they will be doing for the project. Atkins, as a resource partner, is completing the scorecard of their Future Proofing Cities methodology for two of the project's municipalities: San Pedro de Macoris and Las Terrenas. 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 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 measures to counter the effects of climate change. They can then simulate city growth over the planning horizon with the master plan scenario in place and measure how effective the plan is at both encouraging growth and keeping the city resilient. This process is called stress testing. By comparing various scenarios, users can make decisions on which master plan they would like to proceed with. *For more details on the Future Proofing Cities tool, please refer to Atkin's factsheet in Annex B.*

We opted to have Atkins concentrate in Las Terrenas and San Pedro as these are the two municipalities with the least amount of available information. Since the resources allocated within our budget for resource organizations are limited, Atkins will work with available data to complete the municipalities' report cards. Atkins will focus on providing results specific to precipitation/drought and sea level rise (using Bath Tub Analysis). Their preliminary results will be presented in January 2016 and their final trip, during which they will present their results to the municipalities, will happen in March.

Atkins also identified items which are currently not in their scope of work (or the project's), but they think would be very useful for developing land use plans with integrated climate adaptation for these communities. These include installing stream gauges in the target areas, calibration of data, conducting interviews with community members and a drone-based survey of Las Terrenas and San Pedro to get more detailed topography and more high-resolution imagery. As part of the program's year 2 planning and implementation process, we will discuss with USAID the possibility of expanding their scope to complete calibration of the model for Las Terrenas.

USDA/USFS i-Tree workshop. The Program's Climate Change Specialist and Technical Coordinator participated in the USDA Forest Service i-Tree³ training in Puerto Rico from November 6th through 9th. Jose Miguel Martinez, Environmental Secretary ADN, Ana Pou,

³ "i-Tree is a state-of-the-art, peer-reviewed software suite from the USFS that provides urban and community forestry analysis and benefits assessment tools. The i-Tree tools help communities of all sizes to strengthen their urban forest management and advocacy efforts by quantifying the environmental services that trees provide and the structure of the urban forest." - i-Tree description, USFS brochure.

Manager of Risk Prevention and Reduction at ADN, Indhira Ortiz, Urban Planning Coordinator in San Pedro de Macorís, and José Leandro Santos from the DGODT, also participated in this important training. The i-Tree Tools will be introduced to ADN in February through a USFS training where attendees of the aforementioned workshop will show ADN staff how to use it in different areas such as the Colonial Zone. It could also be useful for forestry analysis in the Las Terrenas municipality.

This course was taught in a three-day mini-course format focused on the analysis and management of forest data for the evaluation of ecosystem services using the iTree suite of tools. These tools, developed by the United States Forest Service and being applied in many cities throughout the world, are used to evaluate the eco-system services provided by trees and produce information that can be used for forest management. A focus of this course was on the assessment of forest resources in urban sites based on the vision that the ecological services these resources offer are important for human welfare and for the proper functioning of urban areas. The objectives of the course were as follows: 1) to develop an understanding about the conglomerate of iTree tools with emphasis on iTree Canopy/ Landscape, iTree-Eco/Species and iTree Design, 2) to understand the applications and limitations of these tools for the evaluation and research on urban ecosystem services, 3) to train participants in the generation of useful intellectual products that can help communicate information about ecological services provided by the green infrastructure of cities to the general public and to interdisciplinary working groups. *i-Tree Canopy* is the software that can be taught to the local municipal staff as it is most applicable to the Dominican Republic.

As part of the GIS support the program is planning to provide to the municipalities, and in collaboration with USFS, we plan to incorporate the i-Tree tools into trainings. i-Tree can help the municipalities to develop one of the key layers for the analysis and understanding of green infrastructure for adaptation: the ecosystems services provided by tree canopy within the urban area is a basic adaptation tool, as they reduce the effect of heat waves, help manage storm water flows and help improve air quality.

The USAID/ICMA Planning for Climate Adaptation Program is working closely with the USAID/INTEC Improved Climate Information Program in various initiatives. In addition to regular meetings and frequent communication with INTEC's team, ICMA's partner ICF has reached out to CCNY to coordinate the scope of the project's respective work plan related to assessing vulnerability. Also, on December 15th, the COP, Indhira De Jesus participated in a meeting at INTEC with the Climate Information Program's partners CCNY and FHI360. REDDOM and the Council for Climate Change also attended the meeting. Omar Ramirez, executive vice-president of the Council, highlighted the importance of having reliable and timely climate information for decision making processes. He also stressed the importance of coordination amongst different initiatives. CCNY explained their approach to the production of specific information products related to key aspects of climate vulnerability in each municipality. ICMA explained the scope of the vulnerability assessments we are currently working on.

Training and Knowledge Exchange for Political and High-Level Decision Makers

To further enhance **local capacity to incorporate appropriate climate and weather information to decision-making and operational processes**, various Program initiatives took place during this quarter.

Municipal Management and Community Participation Certificate Course. On Friday, October 2 an opening ceremony was held at the Caribatico Building to kick off the second Certificate Course sponsored by the Program. This course is being taught by professors of the Instituto Tecnológico de Santo Domingo (INTEC). The course is comprised of 7 modules (120 hours). The course is taken by key personnel from various institutions linked to the Program:

- Staff from the National District, Santiago, San Pedro de Macorís and Las Terrenas
- Officials from the General Directorate of Land Use Planning and Development (DGODT) of the Ministry of Economic Planning and Development (MEPyD)
- Officials from the Ministry of the Environment
- Officials from the National Council for Climate Change and Mechanism for Clean Development (CNCCMDL)
- Federación Dominicana de Municipios (FEDOMU) Employees

ICF International staff Joanne Potter, Molly Hellmuth, and Angela Wong conducted a **‘Training of Trainers (TOT)’ Workshop** involving key program stakeholders as part of a programmed visit to Santo Domingo from November 30th to December 4th. The group engaged key audiences from the four targeted municipalities in a two-day interactive session. ICF’s team presented its **methodology to seamlessly integrate consideration of climate-related vulnerabilities into municipal land use planning processes**. This training was designed to allow those trained to actively support and subsequently lead a 1.5-day interactive workshop which builds the capacity of specific municipalities. During the training, the methodology presented was put into practice through a series of group exercises for an example pilot city -- Las Terrenas. Following the exercises, a panel discussion explored the different contexts of the four pilot cities.

The workshop agenda emphasized the following elements:

- ✓ Team work, discussions and dynamics
- ✓ Importance of land use planning for municipal development
- ✓ An explanation of the fundamentals of climate change (including the concepts of exposure, sensitivity, potential impact, adaptive capacity, and vulnerability)
- ✓ Introduction of key framework documents to set the context, including the draft DGODT municipal land use planning guide and the USAID CRD framework
- ✓ The climate change vulnerability and adaptation tools that will be included in the DGODT land use guidance toolkit was also briefly introduced. The tools are designed to facilitate integration of climate change into the land use plans and draw heavily on concepts presented in the training of trainers’ activities.
- ✓ Climate change in integration to the DGODT municipal land use planning process
- ✓ Identification of key municipal development sectors, assets, people
- ✓ Pinpointing key factors and conditions that support the key municipal development sectors that may be affected by climate change
- ✓ Identification of relevant climate and non-climate information and assessment exposure of key factors, conditions, and sectors
- ✓ Identification of the potential impacts of climate change on key factors, conditions, and sectors
- ✓ Identification of adaptive capacity

- ✓ Assessment of near-term and long-term vulnerability of key factors, conditions, and sectors

19 Members (63% women) from the following institutions were trained:

- ✓ Dominican Federation of Municipalities (FEDOMU)
- ✓ Ministry of the Environment and Natural Resources
- ✓ Ministry of Economy, Planning and Development/General Directorate of Land Use Planning and Development (MEPyD/DGODT)
- ✓ USAID/INTEC Climate Information Program), and the
- ✓ Third National Communication to the UN Framework Convention on Climate Change

Feedback from participants on the workshop, collected through an evaluation questionnaire, indicated that participants felt the workshop helped build their understanding and capacity regarding climate change vulnerability. Participants expressed interest in additional training and community of practice activities.



Figure 7: DGODT urban planning representative presents group exercise vulnerability assessment results

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

During this quarter, Program staff provided significant assistance to the DGODT/MEPyD in **developing a land use planning guide which incorporates CCA goals and objectives**. The methodological guide for the formulation of Municipal Land Use Plans (Municipal POT Guide) is a support tool for municipalities to enable them to generate their own land use plans. It offers an opportunity for mainstreaming climate change adaptation considerations into territorial planning. The guide, completed and sent for printing in December 2015, was developed by DGODT with support from UNDP, GIZ and other organizations. The USAID/ICMA Planning for Climate Adaptation Program team helped identify and incorporate the entry points for climate change

adaptation options, develop a systematic approach for prioritizing and selecting such options in order to increase resilience in the territory, and supported an overall revision of the guide editing the document to facilitate its use. The ICF team developed tools for the incorporation of CCA into land use planning that were included in the Guide's tool box. The Climate Vulnerability Tool (number 7 of the Municipal Land Use Planning Guide's Tool Box) details the steps that each territory must consider to integrate climate change information and climate vulnerability evaluations into the land use planning process. In Stage 2 (Territorial Diagnosis), there are several questions and steps to walk users of the guide through the identification of a territory's vulnerability and critical climate change risks. This tool also defines climate vulnerability and provides specific examples of how and why it affects the territory. A check list of key questions is included in the tool thus facilitating this analytical process. *Please refer to Annex C for a link to the Municipal Land Use Planning Guide.*

Another important initiative under this component is to formalize and Strengthen Public Participation in the Planning Process. In order to achieve this goal, the Program's Citizen Participation Specialist, Andres Cepeda, has been working **on conducting an inventory of community stakeholders and/or building on existing information about key community actors.** To maximize the outcomes of community outreach and Program initiatives to achieve public participation, the strategy to approach CBOs and vulnerable groups was established during this reporting period. The strategy will be implemented through the working group mechanisms and it is based on training, consultation and validation of documents to be produced for the land use plan. During this quarter, communications and training materials were drafted that comprehend the Program's main topics: participation, vulnerability and land use planning.

The program is also working with the Third National Communication Project and the National Council on Climate Change, to engage young people in the development of tools for communication and outreach regarding climate change, and to facilitate citizen participation in the municipal planning processes. For next quarter, the program will support the organization of a hackathon and will follow up on the development of the best tools.

Climate Change and Gender Awareness Meeting. On December 9th, Andres Cepeda, and Indhira De Jesús presented the USAID/ICMA Planning for Climate Adaptation Program to a number of community organizations in Santiago, in a meeting coordinated with the Núcleo de Apoyo a la Mujer (NAM-Core Group of Support for Women). Xiomara Garcia, NAM's Director, was very motivated when the program reached out to the organization to engage Santiago's women in climate change adaptation and land use planning processes within the municipality. Indhira De Jesus presented climate change aspects and how they affect vulnerable populations, such as women. She also presented Program goals and objectives. Mirtha Saleta, from Santiago's Strategic Development Council, attended the event which included 30 women and 4 men. The men were all part of a youth group called Juventud Cívica Proactiva. The women represented different organizations, including mother's clubs, feminist groups and immigrant rights organizations.

Meeting with Civil Society Organizations in Las Terrenas. On Wednesday, October 7th, the ICMA team organized the first meeting with community-based organizations of Las Terrenas at the town hall. During the gathering, Dr. Mariana Vanderhorst, Mayor, spoke of the great role the Program is playing in land use planning and climate change adaptation in Las Terrenas. The activity was an opportunity to identify the different community-based organizations participating in the planning processes as well as the inactive ones and to present Program objectives and

components. Mrs. Montserrat Acosta, USAID DR's Climate Change Specialist attended the event. A total of thirty-one (31) community leaders and municipal staff participated in this activity. Nine (9) of them, or 29% of the total, were women.

Country visit from I2UD resource partner representative, Oriol Montfort. During the week of October 5th, Mr. Oriol Montfort from I2UD was in the country working with Program staff on identifying practical methods of inclusive development for vulnerable communities. He worked closely with the Community Participation Specialist and Technical Coordinator,. Also, he was able to meet with the ICMA and FEDOMU teams; community leaders from the Comité para la Defensa de Asuntos Barriales (COPADEBA), Ciudad Alternativa, IDDI, Fundación Tropigas and others accompanied by Technical Coordinator, Andrea Vogel. During his visit, he began to identify opportunities and models for engaging the private sector in planning for climate adaptation based on I2UD's experience. I2UD will be key in assisting program staff with promoting good practices in awareness raising and developing a common language amongst participants in the planning and decision making processes related to climate change adaptation. Mr. Montfort participated in the first encounter with community leaders of Las Terrenas where program staff presented objectives and met community leaders. He also visited the San Pedro de Macorís Municipality and staff with Technical Coordinator, Andrea Vogel, in order to gain a better understanding of program implementation.

Promote city twinning between target municipalities and U.S. cities

Program Director, Isabelle Bully– Omictin has identified cities in the US willing to partner with the three target municipalities and the National District. Thus far, three cities have been identified and have committed to engaging in a CityLinks relationship to promote the exchange of experiences in climate change adaptation. The cities of Fort Lauderdale, Florida; Dubuque, Iowa; and Austin, Texas have been partnered with San Pedro de Macorís, Santiago and the National District, respectively. Negotiations are currently under way with several cities for a partnership with Las Terrenas which will be defined next Quarter. All selected cities have gone through in-depth community visioning processes and have integrated climate adaptation considerations into their land use plans. ICMA's City Links partnerships are a way to enable local municipal officials to draw on the resources of their U.S. counterparts to find sustainable solutions tailored to the real needs of their cities. It is based on the premise that well-managed cities are the key to efficient service delivery, economic growth, sound management of resources, and political stability.

Direct support from these communities will not only result in knowledge and innovation transfer during the project but partnered cities typically also communicate long after the official partnerships have concluded.

CityLinks Partnership: Fort Lauderdale and San Pedro de Macorís (Nov. 9-13). The City of Fort Lauderdale's Sustainability Manager, Glen Hadwen and Principal Planner Linda Franco spent a week on an exchange to San Pedro de Macorís Municipality. For this visit, the Fort Lauderdale team was tasked with performing a reconnaissance to identify initial concerns and challenges regarding integrating climate change into municipal planning processes. During their week in San Pedro, Fort Lauderdale staff met with San Pedro representatives including its Mayor,

the Governor of the province, and a technical team of San Pedro city staff working on issues related to climate change and land use. In these meetings, the team discussed the many challenges facing San Pedro and toured the City, including flood-prone neighborhoods, the fire department, and the water utility system and geographic features, such as the Soco and Higuamo Rivers.

In an effort to learn about the two cities' similarities and contrasts, staff from both cities presented on their initiatives and vulnerabilities to the technical team and stakeholders.

The Fort Lauderdale staff made three presentations, on the following:

1. Climate change issues in Fort Lauderdale;
2. Use of Geographic Information Systems (GIS) for vulnerability assessments and land use planning; and,
3. The Fast Forward Fort Lauderdale: 2035 Vision Plan and Press Play Fort Lauderdale: 2018 Strategic Plan to emphasize citizen engagement processes.

The San Pedro staff made a presentation regarding demographics, vulnerabilities and their Municipal Development Plan 2013-2016. The team also met with the Dean of the School of Architecture and Urbanism from the local university, Universidad Central Del Este, to learn about efforts to bring in a GIS system to the university. ICMA Climate Change Specialist Dr. Alejandro Herrera-Moreno provided the Fort Lauderdale staff a copy of the "Draft Vulnerability Assessment to Inform Municipal Land Use Planning" and other documents provided by various ICMA and San Pedro staff on the demographics and other characteristics of San Pedro.

San Pedro de Macorís is a coastal city about the size of Fort Lauderdale, which shares many similarities and challenges with Fort Lauderdale. Fort Lauderdale has participated in several USAID-funded city-to-city partnerships and is a leader in planning for climate change in the United States. The City has played a critical role in the creation of the Southeast Florida Regional Climate Change Compact, a model for regional collaboration around climate change issues. During this visit, the Fort Lauderdale team discussed the challenges facing San Pedro and how Fort Lauderdale has addressed these types of challenges as well. The Fort Lauderdale and San Pedro teams identified potential areas for future collaboration. The main areas were:

1. Climate change scenarios. Discuss how Fort Lauderdale incorporates climate change scenarios, including temperature, precipitation, sea level rise, and storm surge into adaptation and land use planning.
2. Flood management. Visit Fort Lauderdale's flood control facilities, including backflow preventers, pumping stations, and green infrastructure strategies. Discuss long-term planning operations and maintenance strategies, and how the City is adjusting its flood control planning to incorporate climate scenarios.
3. Alternative energy. Visit with local experts on renewable energy and discuss options and strategies for increasing and diversifying energy supply in San Pedro.
4. Early warning and disaster risk management. Discuss parallels to hazards in San Pedro and the city's early warning systems that are not solely reliant on the electric grid, but rather multiple

power sources. This may be particularly applicable to developing a warning system for riverine flooding.

5. Zoning and land use planning. Discuss how Fort Lauderdale is incorporating regulations to address climate vulnerabilities into their zoning and land use code, taking into consideration historic buildings and existing infrastructure.
6. Citizen engagement. Learn about citizen engagement efforts in the City of Fort Lauderdale government, particularly on issues related to land use and climate change.
7. Regional collaboration.
 - Learn how the Southeast Florida Regional Climate Change Compact is helping counties and cities share climate data and adaptation strategies. Discuss parallels to the efforts to address climate adaptation in the Dominican Republic; and,
 - Continue to explore opportunities to expand regional collaboration with entities such as the Federacion Dominicana De Municipios (FEDOMU).

The next step in the partnership will be the visit to Fort Lauderdale in early April 2016. After the exchange visit, both cities will agree on a work plan for Fort Lauderdale to support SPM in addressing one or more of the identified issues. *For the complete trip report from the Fort Lauderdale delegation, please refer to Annex D*

CityLinks Partnership: Dubuque and Santiago (Nov. 16-20). Cori Burbach, Community Liaison Coordinator, and Denise Ihrig, Environmental Engineer from the city of Dubuque Iowa traveled to Santiago to exchange experiences, lessons learned and success stories in climate change adaptation measures with officials from Santiago. Mayor Gilberto Serulle welcomed the officials from Iowa and engaged in a dialogue with them to explore important initiatives that Dubuque has implemented to achieve resilience to climate change. Santiago’s mayor and the municipality’s land use planning officials shared Santiago’s climate change adaptation initiatives and its plan for building a resilient city. Dubuque officials also met with Santiago’s Strategic Development Council (CDES) members, and presented the Dubuque experience in sustainability and resiliency. The representatives from the CDES had a very active session; asking questions and sharing their own experiences after the presentation. The delegation from Dubuque also visited CORAASAN installations and met with its director.

Dubuque and Santiago are very different cities in size and history. Nonetheless, they share similarities in their inland location and morphology, both sitting next to a large river, as well as some of the same challenges in terms of flooding, development, and relationship to rural areas. The City Manager of Dubuque is an active member and past Chair of ICMA’s Sustainability Committee and is playing an important role in promoting the importance of implementing climate change adaptation strategies within ICMA’s membership.

The Dubuque delegation observed that the City of Santiago has “a clear understanding of what climate change will look like for them, and that that understanding is rooted in sound science,” but they also noted that the City is not considering secondary effects of climate change, which could

hinder their ability to properly respond to those impacts. They identify as one key potential product of this partnership the development of an adaptation plan for the City.

The visit allowed the Dubuque delegation to observe some of the systemic differences (legal system, fiscal structure, mandates and operational organization, for example) between US and DR cities, and the challenges and opportunities some of these differences represent. Their recommendations for the main themes in the agenda of the DR trip to Dubuque planned for next April are the following:

1. In general, to focus cooperation on:
 - Strategic planning & continuity across administrations (implementation, prioritization, funding, enforcement)
 - Water systems (drinking water, wastewater, stormwater management)
2. As special points of interest, the following topics and departments:
 - Energy creation at the Dubuque Metropolitan Area Solid Waste Agency and Water & Resource Recovery Center
 - Emergency Preparedness & Response, and current efforts to incorporate climate adaptation and resiliency into those plans
 - The Jule Public Transit System.

After the DR delegation visit, an action plan will be developed with the specific technical activities in which Dubuque will collaborate with Santiago. *For more detail regarding the visit, please refer to Dubuque's trip report in Annex E.*

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.

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).

On the 14th of December, the ICMA and FEDOMU teams met to discuss the **Program's first year of implementation and second year (19-month) work plan**. The personnel engaged in an integrated work planning session and discussion of progress towards achieving program objectives. The first year of Program implementation was reviewed through conversations and exercises which resulted in an updated calendar of activities and strategies. The FEDOMU team is integral to the work planning process and ICMA continues to build its institutional capacity to prepare for the scaling up of Program initiatives starting in Year 3. The program expects to present its second year work plan no later than February 5th, 2016. The program's first year ends on March 5th, 2016.

Furthermore, ICMA's team participated in the **III Conference of Green Municipalities** on October 23rd which was organized by FEDOMU and other organizations. Program COP, Indhira De Jesus; Climate Change Specialist, Alejandro Herrera; and Laura Rathe, President of Fundación Plenitud, and INTEC's partner, facilitated a Panel on "Vulnerability and Adaptation to Climate Change and the Construction of Resilience in Coastal Municipalities". The conference served as a platform for dialogue between local authorities, municipal associations, and other global climate change stakeholders from 18 countries in Latin America. Over 400 mayors, council members, and other municipal officials attended the conference, which served as a platform to exchange climate change related initiatives at the local government level. Over 30 mayors and representatives from municipalities in the DR, Central and North America attended the panel on resilience of coastal municipalities facilitated by ICMA. Erick Dorrejo, Municipal Planning Specialist, served as rapporteur in the Land Use Planning Panel, which featured presentations by Frank Labour, DGODT Director, and Olga Luciano, Consultant. Isabelle Bully Omictin, Director of ICMA Latin American/Caribbean Programs, and Andrea Vogel, Technical Coordinator, were also present at the conference. Bert Lumbreras, Assistant City Manager for Austin, Texas and an ICMA Board Member, also gave a presentation on Austin's climate change programs at a plenary session and attended the FEDOMU

Assembly where he signed an Affiliate Agreement with ICMA to share information and engage in meaningful and mutually supportive activities.

During this quarter, Mr. Carlos Loría Chavez, Director of AMUPREV, continued to work with FEDOMU on conducting an **institutional assessment using the Association Viability Index**, a tool developed by ICMA to help associations develop sound and sustainable institutions. This assessment will serve as a basis for institutional strengthening activities to be conducted under component 3 of the Program. FEDOMU will be initiating in January 2016 the implementation of a EU funded project dedicated to strengthening the institution's capacity to fulfill its mission. The ICMA team will work very closely with FEDOMU's project to leverage resources and promote synergies in our respective's work-plans.

Program Administration and Coordination with other activities

- ✓ During October 2015, Program Director, Isabelle Bully-Omictin traveled to the Dominican Republic to meet with Program and FEDOMU staff to support institutional strengthening activities and follow up on project implementation.
- ✓ First Data Quality Assessment conducted by USAID AOR, Odalis Perez, and Climate Change Specialist, Montserrat Acosta, during October 2015. The USAID team made emphasis on the different aspects of data quality and requested completion of a data quality assessment for each Program indicator.
- ✓ During this quarter, the Program's COP, Indhira De Jesus, was able to establish regular coordination meetings among USAID Dominican Republic's climate change Programs. Program directors and other technical personnel are meeting on a monthly basis to collaborate and coordinate efforts to streamline processes and implementation of climate resilience in the country. Participacion Ciudadana's project on transparency and climate governance is also participating in the meetings. During this quarter, several initiatives have been implemented and others are being discussed, for example:

- Organized visits and interviews at target municipalities and interviews with high level decision makers
- Collaboration to collect important climate change related data
- Communications strategies and mechanisms (climate change information systems, communications materials, etc.)
- Trainings and institutional capacity building initiatives

IV. Outstanding Issues/Challenges and Remedial Actions Taken

Sub-awardee administrative/financial management capacity: Even though ICMA has provided training to our local partners, FEDOMU and INTEC, in administrative procedures, this past Quarter neither organization was able to submit the appropriate paperwork as back-up in order for us to process their invoices, resulting in a lower-than-anticipated expenditure rate for the Quarter. We also had some issues with ICF related to differences in reporting and organizational processes which have now been cleared up. There is a need to provide further support and explanations to strengthen the administrative capacities of INTEC and FEDOMU in order to facilitate financial reporting and ensure timeliness in expenses reports/invoicing. In order to conduct this training, we will facilitate Webex meetings with HO during the next Quarter; also DR staff will participate in the training organized by the Mission in February and will replicate with our partners shortly afterwards. Later next quarter or during Q3-FY16, Astrid Hernandez, Field Office Operations and Finance Manager from ICMA HO will visit the DR to meet with the partners and clarify any remaining issues.

Beyond sub-award specific administration and finance issues, the project will be working closely with FEDOMU to increase institutional capacities based on the results of the assessment tool mentioned in the previous section.

- b. Land use planning and climate change adaptation for national and local leaders: During this reporting period important advances were made in the process to engage municipalities and establish the working groups. Significant additional effort will be required related to training and building capacities at the national and local levels both in land use planning and climate change adaptation.
2. Reaching out to vulnerable groups: Engaging vulnerable groups has been a challenge, as organizations representing these groups are focused on other issues, such as their civil rights, access to services and infrastructure, social acceptance, gender violence, among others that are affecting their constituencies more urgently. The program will continue its efforts thru outreach and communication activities.

3 Electoral process: The electoral period continues to represent a challenge as many of our key stakeholders are actively involved in the political process. This affects the scheduling of activities and the participation of non-governmental stakeholders. In general, our municipal counterparts are

available and actively participating in project activities, but the political campaign is just warming up. Also, the program has to be aware of the risk that our activities could be exploited by activists on either side of the political divide in a municipality, as an opportunity to further political agendas. As indicated in our previous report, the program plans to compensate by concentrating in the following activities:

- building capacities for participation at the community level
- training of the working group members
- increasing FEDOMU's institutional capacities
- reaching out to main candidates and their technical teams
- working on the selection process for the micro-grants that we plan to award by mid-2016, and
- conducting the evaluation and planning process for the project's second year, in close collaboration with all other CLIMA partners.

After the elections, we hope to be able to address the issue of retaining key staff with elected officials during the transition period through FEDOMU, as they have been working under the EU program PASCAL led by the Ministry of Public Administration (MAP) in promoting the institutionalization of municipal governments.

V. Planned Performance Objectives/Proposed Activities for next quarter

- In coordination with DGODT and UNDP, promote the use of the Municipal Urban Planning Guide of the Dominican Republic through training, workshops and publications.
- Complete and present the capacities and needs assessment for the four municipalities.
- Create and start implementation of a communications and outreach strategy to strengthen public participation in CCA inclusive land use planning
- Finalize vulnerability assessment and adaptation assessment of each municipality.
- Continue to provide technical training to municipal staff and other key stakeholders.
- Support FEDOMU's institutional strengthening, working closely with their EU funded project.
- Launch small grants process.
- Collaborate with the NCCCCDM and the Third Communication Project in a hackathon, to promote awareness and support the development of IT and communications tools for citizens' participation.
- Present second year work plan (for the next 19 months of project implementation).
-

VI. Upcoming events

- Monthly technical team meetings at each municipality.
- Quarterly working group meetings at each municipality in March.
- Trainings on Program’s implementation methodology to FEDOMU’s technical coordinators
- Visit from Austin, TX, city officials to ADN.
- Formal ceremony to present their Diplomas to the participants in the first two certificate courses. Mid February.
- Gender and inclusion awareness workshop facilitated by INTEC for program’s staff and key stakeholders. Late February.
- Climate change hackathon. Early March.
- Training on Vulnerability Assessment and Climate 101 for sectoral agencies: a workshop with representatives from local government agencies relevant to municipal resiliency, facilitated by FEDOMU and DGODT staff previously trained by ICF. Mid March.
- Meetings with Political Candidates – Discussions on Resilience and Climate Change Adaptation, in coordination with CDES and Participacion Ciudadana.
- Citylinks exchange visit to Fort Lauderdale from San Pedro de Macorís officials and to Dubuque, Iowa with Santiago officials

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.

VIII. Progress on Performance Monitoring Plan (PMP)

The table below presents a summary of the Program’s selected and approved indicators, their level of achievement up to date and a section with comments towards completion of targets.

Annex A - Performance Indicators Summary

USAID/ICMA Planning for Climate Adaptation Program								
Indicator	Type	Data Source	Unit	Frequency	Base Line	Fiscal Year 1 (March 2015 to March 2016)		Comments
						Y1 Targets	Y1 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	TBD	0	In Progress	The Program initiatives during the first 10 months of implementation have focused on establishing a baseline to measure the current state of institutional capacity in climate change, land use planning and related topics. Municipal Planning Specialist, Erick Dorrejo is working on completing a report of the capacity and needs in each municipality for the next reporting period. To understand the capacities in other institutions, the methodology will be replicated in all Program municipalities.
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	In Progress	Program staff is working on initiatives to assist municipal staff in considering and analyzing legal frameworks inclusive of climate change adaptation measures.
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	TBD	0	In Progress	The Program's Climate Change Specialist, Alejandro Herrera, has been planning different activities to begin preparing municipal staff and other stakeholders to incorporate climate change information to their decision making process.

USAID/ICMA Planning for Climate Adaptation Program								
Indicator	Type	Data Source	Unit	Frequency	Base Line	Fiscal Year 1 (March 2015 to March 2016)		Comments
						Y1 Targets	Y1 Achieved	
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	The Program has reinforced the incorporation of climate adaptation considerations into DGODT's guide for the formulation of Municipal Land Use Plans (PMOT, by its Spanish acronym). In addition to the work done to improve the main body of the guide, the program developed a climate adaptation tool for the guide's Tool-box. <i>See Annex B for more details and reference to this tool.</i>
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	84	35 people (56% women) completed the climate change adaptation diplomado from September 2015 to January 2016. 30 people (53% women) completed the citizenship participation and land use planning diplomado from October 2015 to January 2016. 19 people (63% women) participated in Training of Trainers, conducted by ICF Int'l on "Integrating Vulnerability Assessments to Land Use Planning"
6. Number of climate vulnerability assessments conducted as a result of USG assistance.	Output	Program Reports	Count	Quarterly	0	4	In Progress	Significant progress was made during this quarter, to advance the completion of four vulnerability studies (one for each municipality). The content of each assessment was defined by the ICF and ICMA teams during this quarter and deadlines were established for the completion of each. Climate Change Specialist, Alejandro Herrera, and the ICF International

USAID/ICMA Planning for Climate Adaptation Program								
Indicator	Type	Data Source	Unit	Frequency	Base Line	Fiscal Year 1 (March 2015 to March 2016)		Comments
						Y1 Targets	Y1 Achieved	
								team, led by Michael Savonis, began training staff at each municipality to conduct vulnerability assessments. During this quarter workshops were held at each municipality with vulnerability-specific exercises to enhance the research and data collection for each assessment.
7. Number of city partnership programs fostered as a result of USG assistance.	Output	Program Reports	Count	Quarterly	0	1	In progress	This quarter partnerships among officials from Dubuque, Iowa, and the municipality of Santiago; the city of Fort Lauderdale, Florida and San Pedro Macoris and the City of Austin and the National District were established. City of Austin staff will be visiting ADN next quarter.
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	In Progress	Program staff, in coordination with Andres Cepeda, Citizen Participation Specialist, is in the process of 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.

Annex B: Future Proofing Cities Tool Factsheet

Atkins Future Proofing Cities Process and Tools

City managers around the world are looking for ways to grow their cities vibrantly and securely. Through Atkins' Future Proofing Cities (FPC) process, city managers can create an atmosphere where resiliency issues are discovered and explored, impacts are evaluated and communicated, and plans to address them are designed and enacted.

The Future Proofing Cities Process

The process consists of an initial report card followed by a workshop for developing a city master plan. The report card focuses on quantifying city strengths and challenges, and showing how the city is doing compared to other global cities. Often, the report card reveals hidden strengths in the city that can be leveraged to respond to challenges.

The workshop builds on the report card, bringing stakeholders together and empowering them to suggest solutions and quantify how effective the solutions will be.

It is this latter aspect – the concept of stress testing suggested master plans – that differentiates future proofing. Traditionally, master planning has been an aspirational exercise, where a city declares its preferred direction through zoning plans, capital improvement plans, and policy packages. Future proofing brings a realistic verification of those plans by simulating the plan in place with both urbanization and climate change occurring. The central tool used in this process is the FPC Simulation tool. Developed to give stakeholders a canvas for testing their master planning concepts, the tool uses a highly visual map-based backdrop. Stakeholders can swap out different land use plans, policy changes, general

THE IMPACT OF LANDUSE PLANNING



The resort town of Las Terrenas lies on the north coast of the Samana Peninsula in the Dominican Republic. In the past 30 years, its population and housing stock have grown approximately 300% due to increasing industry, tourism, and an influx of wealthy retirees from other countries. Located directly in the path of Atlantic tropical storms, the city must ensure that it can continue its growth in light of potential climate change impacts of storm frequency and size.

Using the FPC Simulation tool, Atkins was able to quickly create two scenarios for the city. In the first, new growth in the city was unconstrained, and allows to occur in the floodplain of the Las Terrenas River and close to the coast. In the second scenario, new development was guided to growth areas outside the floodplain. The net result was a reduction in lost productivity due to storms; in a 2019 large hurricane, the reduction was forecasted at \$30M, or about 25%. The future proofing process quantifies the value of new policy, new infrastructure, and new countermeasures to climate change and its effects; empowering stakeholders to make informed decisions.

improvements to infrastructure, and on-the-ground counter measures to climate change and its effects. The tool uses a sophisticated agent-based modeling approach that literally models the people in the city, tracking their productivity and measuring how effective the combined measures in the master plan really are. The end result is a stakeholder group that is satisfied that all ideas have been explored; a stakeholder group that takes ownership of the final master plan adopted.

The Future Proofing Workshop

The main event of the FPC process is the workshop where stakeholders come together to plan the city. The success of the workshop is largely dependent on the preparation phase, in which a virtual version of the city is built in the FPC Simulation tool. The Atkins team facilitates this process, collecting data on demographics, city governance, existing land systems, existing city infrastructure and assets, and natural systems. Often, data collection tasks are necessary as part of preparation such as a drone flight to collect topographic data of the city so that accurate floodplains can be modeled. Stakeholders are interviewed in the preparation phase to make sure the final city model performs accurately and as expected.

The workshop itself is a one-to-two day event with three sessions.

Workshop Session 1: Creating Master Plan Scenarios

In the first session, stakeholders define master plan scenarios consisting of:

- **Policy and planning measures** - eg. Enforce no building in floodplains or along coasts, provide tax incentives for funding education to employees,
- **Infrastructure improvement measures** - eg. Improve size and efficiency of water treatment plant, install high speed fiber optic communications network, and
- **Physical counter measures to climate change and its effects** - eg. Sea walls, natural dunes systems.

The FPC Simulation tool contains dozens of ideas for resiliency-building solutions, which the stakeholders can evaluate and select. They are stored in the tool's internal databases and are pulled from external sources,

Future Proofing Outcomes

Preparation Phase

- Detailed database of City economic, social, and environmental data.
- Virtual Model of the City ready for master planning and stress testing.
- Informed Stakeholders

Workshop Session 1

- 4-6 Master Plan Scenarios including future land use plans, policy and planning measures, infrastructure improvement projects, and physical counter measures to climate change
- Stakeholder-agreed metrics for comparing scenarios
- FPC Simulation tool Capacity Building for City Stakeholders
- Capacity Building for stakeholders in terms of learning available climate change solutions

Workshop Session 2

- Scenario results
- Scenario Comparison Charts
- Stakeholder proficiency in using the FPC Simulation Tool, understanding the modeling process, and learning available climate change solutions

Workshop Session 3

- A selected Master Plan

like the Adaptation Atlas – a global database of existing resiliency projects from our partner, ReFocus Partners.

A key element in each scenario is the future land use plan, which lays out future commercial, industrial, and residential growth areas, and areas for environmental protection.

The workshop facilitation team instructs stakeholders in using the tools to create scenarios. The goal is to create four to six alternatives.

Stakeholders also select a suite of metrics they will use to compare the scenarios. Several dozen metrics can be calculated for each scenario. These metrics focus on economic prosperity, social well-being, and environmental health. Stakeholders will select those metrics that they deem important to their city, and on which they believe they can reach consensus for the master plan to move forward .

It is important to note that the FPC process is a Planning process, and the measures introduced in the master plan scenarios are “sketched” on the map. They are not detailed ready-to-build engineering designs. The function of the FPC process is to get city stakeholders to the point where they have selected the specific solutions they want in their master plan, and understand how effective these solutions will be. Once the master plan is selected, the next steps are to arrange funding, develop detailed designs of the solutions in place, and construct them according to the plan’s time line.

Workshop Session 2: Stress Testing

After master plan scenarios are created, we then use the stress testing features in the FPC simulation tool to quantify their effectiveness. The stakeholder-selected metrics are evaluated for each scenario. The simulation runs over a long planning time horizon (typically present to 2050) and sums the metrics over that time frame to provide a way of comparing scenarios. The FPC Simulation tool has been developed as a highly user friendly and visual tool. Simulations take a matter of minutes to run, and are animated as they run to demonstrate the real impacts of climate change on a day-to-day basis. As such, we encourage stakeholders to participate in the stress testing runs, to develop a deep understanding of the simulation results, and to build capacity for using the tool in the future. During the workshops, we will teach stakeholders how to run the tools, and explain the simulation process as they run.

Workshop Session 3: Master Plan Selection – In the final session of the workshop, the stakeholders and the facilitation team will co-present their results and discuss. The goal is to reach consensus on a specific master plan. Comparison of the various metrics will be displayed to the group and merits of each plan will be discussed. Critical parts of the discussion include the feasibility of each plan, the role of the stakeholders in implementing the plans, the primary benefits of each plan, and the challenges each presents. Through a voting process, a master plan will be selected as the final and a justification for the decision discussed and documented as the final workshop deliverable.

Annex C – Municipal Land Use Planning Guide

The Municipal Land Use Planning Guide can be found at the following link:

<file:///C:/Users/Wendy/Downloads/Guia%20PMOT%20final.pdf>

The Climate Vulnerability Tool developed through the USAID/ICMA Planning for Adaptation Program can be found on pages 71 to 78.



GUÍA METODOLÓGICA



PARA LA FORMULACIÓN DEL PLAN MUNICIPAL DE ORDENAMIENTO TERRITORIAL

DIRECCIÓN GENERAL DE ORDENAMIENTO Y DESARROLLO TERRITORIAL

Annex C – Fort Lauderdale Trip Report

Initial Assessment – Technical Assistance on the Integration of Climate Change Considerations into Municipal Planning Processes

INTRODUCTION

The Urban Land Use and Climate Change Adaptation Planning Program (Program) is funded by the United States Agency of International Development (USAID) and implemented by the International City/County Management Association (ICMA). The purpose of the Program is to provide technical assistance on the integration of climate change considerations within their municipal planning processes of four Cities in the Dominican Republic as identified by the ICMA. One of the cities participating in the Program is San Pedro de Macorís (San Pedro).

The City of Fort Lauderdale has actively sought opportunities to partner with cities across the globe regarding Climate Change initiatives and associated issues. The City of Fort Lauderdale recognizes that climate change, as well as sea-level rise are one of the greatest concerns for coastal cities around the world.

Through the City of Fort Lauderdale's continuing involvement with the ICMA, the City agreed to join the Program in early Fall 2015. During the week of November 9, 2015, two City of Fort Lauderdale staff, Linda Mia Franco, AICP, Urban Design & Planning Principal Planner in the Department of Sustainable Development and Glen Hadwen, LEED AP BD+C, Sustainability Manager in the Public Works Department, traveled to the coastal City of San Pedro de Macorís in the Dominican Republic as part of the Program. For this visit, the Fort Lauderdale team was tasked with performing a reconnaissance to identify initial concerns and challenges regarding integrating climate change into municipal planning processes.

During their week in San Pedro, Fort Lauderdale staff met with San Pedro representatives including its Mayor, the Governor of the province, and a technical team of San Pedro city staff working on issues related to climate change and land use. In these meetings, the team discussed the many challenges facing San Pedro and toured the City, including flood-prone neighborhoods, the fire department, and the water utility system and geographic features, such as the Soco and Higuamo Rivers.



Río Soco



Río Higuamo

In an effort to learn about the two Cities' similarities and contrasts, staff from both Cities presented on their initiatives and vulnerabilities to their technical team and stakeholders. The Fort Lauderdale staff made three presentations, on the following:

1. Climate change issues in Fort Lauderdale;
2. Use of Geographic Information Systems (GIS) for vulnerability assessments and land use planning; and,

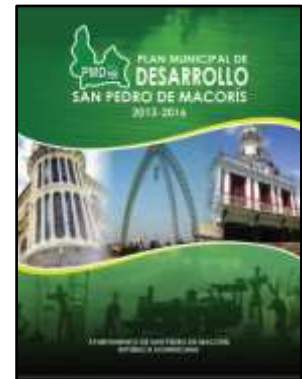




- 3. The *Fast Forward Fort Lauderdale: 2035 Vision Plan* and *Press Play Fort Lauderdale: 2018 Strategic Plan* to emphasize citizen engagement processes.



The San Pedro staff made a presentation regarding demographics, vulnerabilities and their Municipal Plan of Growth, *Plan Municipal De Desarrollo 2013-2016*. The team also met with the Dean of the School of Architecture and Urbanism from the local university, Universidad Central Del Este, to learn about efforts to bring in a GIS system to the university. Dr. Alejandro Herrera-Moreno from USAID-ICMA provided the Fort Lauderdale Staff a copy of the “Draft Vulnerability Assessment to Inform Municipal Land Use Planning” and other documents provided by various ICMA and San Pedro staff on the demographics and other characteristics of San Pedro.



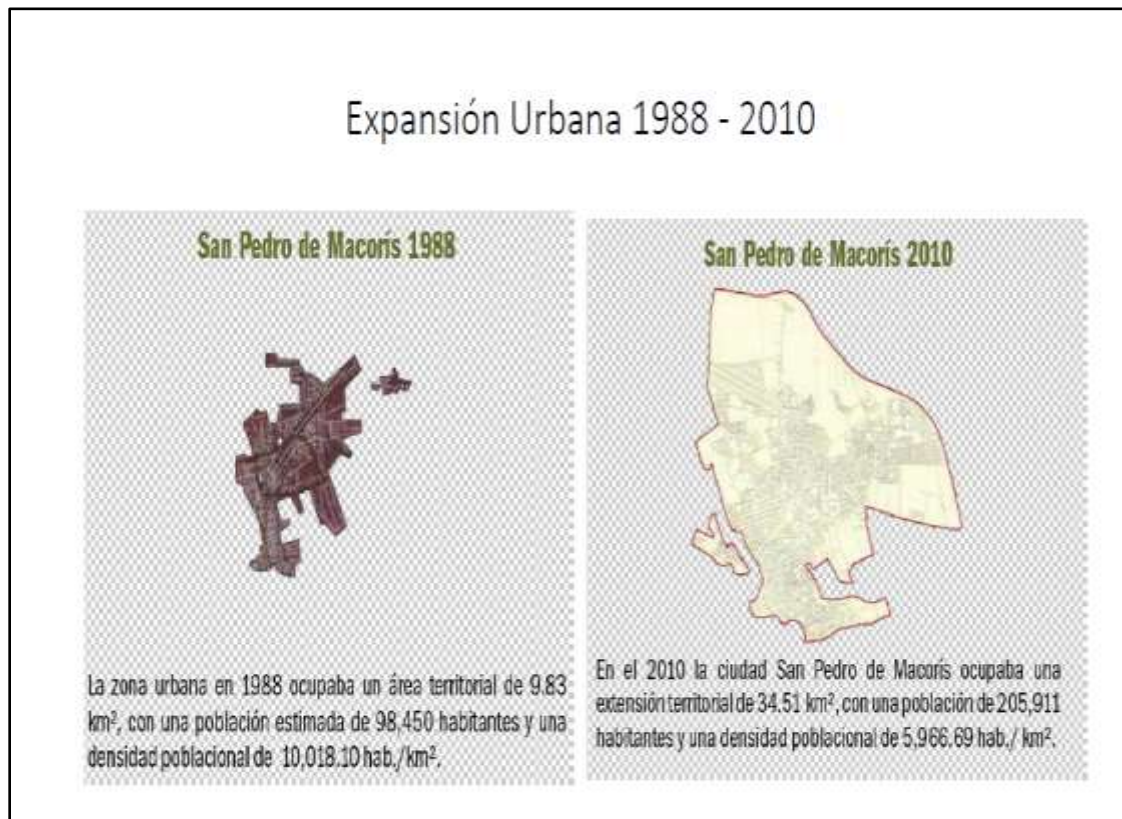
San Pedro de Macorís is a coastal city similar in size to Fort Lauderdale. It shares many similarities and challenges with Fort Lauderdale. It is located on the southeastern coast of the Dominican Republic with an area of 146.7 km² and with 13 km of coastline. Moving inland, elevation increases to 30 meters at the northwest edge of the city. Two rivers run to the east and west of the city. Its current population is approximately 195,307, which represents a doubling since 1988; that rate of growth can stress the City’s infrastructure and resource capacity.

(San Pedro to the left and Fort Lauderdale below)



(Population map)

It was founded in the late 19th Century as a primarily agricultural region, but in recent years, the city has become increasingly urbanized. The Dominican Republic has a strong value for Historical Resources and has regulations for Preserving Historic Buildings. As such, San Pedro contains a decent supply of Historic buildings.





As described in the draft vulnerability assessment, the region has historically been vulnerable to many natural threats including earthquakes, hurricanes and flooding.



CHALLENGE AREAS

During this visit the team discussed the challenges facing San Pedro and how Fort Lauderdale has addressed similar issues. Based on its meetings with ICMA and San Pedro staff, the tours of San Pedro and the review of provided documents, the following items were identified as some of the most significant challenges faced by San Pedro.

1. Development and enforcement of land use regulations. At present San Pedro lacks comprehensive land use regulations. Development sometimes occurs without the City government's knowledge or approval. This includes, favelas, which have sprung up in some parts of the city and lack infrastructure. Currently as part of the ICMA program, land use regulations for San Pedro are being drafted by a consultant. This lack of regulation and enforcement has put substantial stresses on the city's infrastructure.
2. Vulnerability to natural disasters. San Pedro is vulnerable to many natural hazards including flooding, hurricanes, and earthquakes. The history of the incidents is well



documented in the Vulnerability Assessment. In the future impacts of climate change may increase the frequency and intensity of such events.

3. Reliable drinking water supply. Drinking water for San Pedro is drawn from the Soco River. Staff reported that many residents consume bottled water, rather than tap water because of concerns about quality. In addition, due to limited electrical supply the plants for treatment of potable water and for wastewater cannot operate for substantial portions of the day.



4. Capacity and age of stormwater infrastructure. The existing stormwater infrastructure does not have the capacity to handle the current needs of the city. In several vulnerable parts of the city, homeowners built their own stormwater control measures, such as walls around homes and elevated homes. At the university we observed large handmade holes in a concrete wall



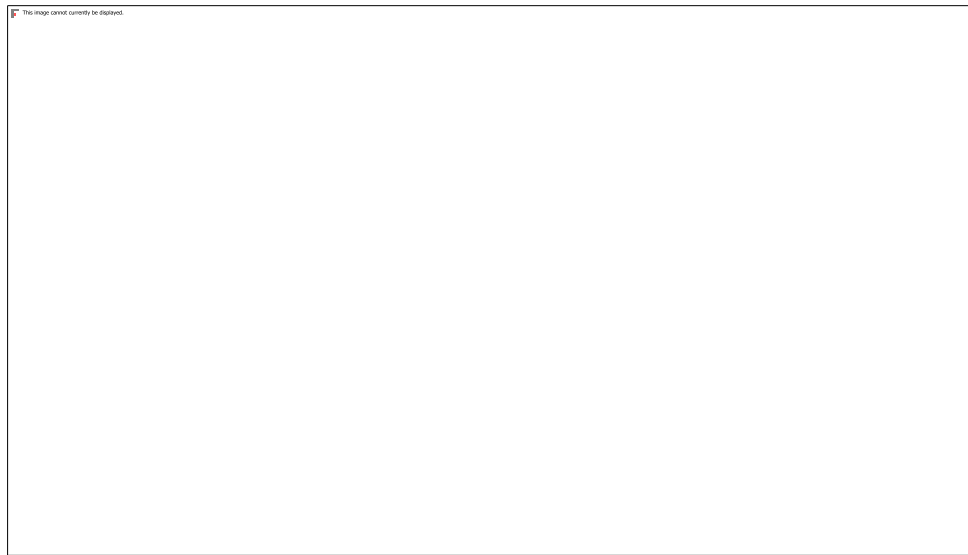
to allow accumulated water to drain. San Pedro staff reported that in some parts of the city puddles remained for days after rain events. San Pedro staff also noted that some of the largest flooding events were caused by riverine flooding from the Soco River.

5. Limited electricity supply. San Pedro is home to a power plant, which provides power to the national grid. However, the electricity provided for City use is typically available for only 12 hours per day. This is an issue particularly for critical infrastructure to function at its maximum potential.
6. Funding for local initiatives. Several staff reported that funding for municipal government programs was controlled at the federal level. By law, cities were entitled to 10% of the annual tax revenues. However, in practice the amount of funding received was far less



than that, often totaling closer to 3%. This limited funding made reduced the capacity of government to implement of local initiatives.

7. Difficulty of multijurisdictional cooperation on these issues. Several staff expressed concerns over the difficulty of collaboration among different regional governments on common issues. For example, lack of stormwater management in communities upstream of San Pedro has a serious impact on flooding in San Pedro.
8. Climate change impacts. As the effects of climate change increase, many of San Pedro challenges will be exacerbated. As identified in the vulnerability assessment, the impacts of climate change such as sea level rise, increased temperatures changed precipitation patterns will have significant impacts on San Pedro. However, the city has limited information on the likely magnitude of these impacts.



According to NOAA tidal gauge record, the tide gage nearest San Pedro is located in Magueyes Island, Puerto Rico. Historical data at this location has shown a rate of sea level rise of 0.52 feet (0.16 meters) per 100 years. This rate is lower than in Fort Lauderdale, likely due to differences in subsidence. It is expected that globally the rate of sea level rise will increase due to the impacts of climate change.

9. Vulnerability and asset mapping. Currently San Pedro does not have a Geographic Information System (GIS) in place. The Universidad Central Del Este has received a grant to bring a system to San Pedro.



10. Waste accumulation. In several parts of the city, garbage was observed abandoned in the middle of streets, vacant lots and waterways.



RECOMMENDATIONS FOR FURTHER EXCHANGE

Fort Lauderdale and San Pedro share several key climate challenges; they are both coastal cities with similar threats ranging from severe weather and storm surge, flooding, and increased temperatures. Further dialog can enhance the programs of both municipalities. During the discussions, San Pedro staff were enthusiastic about finding ways to address their challenges. In order to address the challenges above we propose that during the return visit San Pedro staff consider the following.

1. Climate change scenarios. Discuss how Fort Lauderdale incorporates climate change scenarios, including temperature, precipitation, sea level rise, and storm surge into adaptation and land use planning.
2. Flood management. Visit Fort Lauderdale's flood control facilities, including backflow preventers, pumping stations, and green infrastructure strategies. Discuss long-term planning operations and maintenance strategies, and how the City is adjusting its flood control planning to incorporate climate scenarios.
3. Alternative energy. Visit with local experts on renewable energy and discuss options and strategies for increasing and diversifying energy supply in San Pedro.
4. Early warning and disaster risk management. Discuss parallels to hazards in San Pedro and the city's early warning systems that are not solely reliant on the electric grid, but rather multiple power sources. This may be particularly applicable to developing a warning system for riverine flooding.
5. Zoning and land use planning. Discuss how Fort Lauderdale is incorporating regulations to address climate vulnerabilities into their zoning and land use code, taking into consideration historic buildings and existing infrastructure.



6. *Citizen engagement.* Learn about citizen engagement efforts in the City of Fort Lauderdale government, particularly on issues related to land use and climate change.

7. *Regional collaboration.*
 - Learn how the Southeast Florida Regional Climate Change Compact is helping counties and cities share climate data and adaptation strategies. Discuss parallels to the efforts to address climate adaptation in the Dominican Republic; and,
 - Continue to explore opportunities to expand regional collaboration with entities such as the Federacion Dominicana De Municipios (FEDOMU).

These recommendations are based on our initial assessment of the City of San Pedro. They offer a starting point to establish the next steps for these technical assistance efforts. The City of Fort Lauderdale looks forward to further collaborating with San Pedro through the ICMA program. We invite ICMA and San Pedro staff to review the attached and offer further suggestions on opportunities for learning and collaboration on these issues.

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Annex E: Fort Lauderdale Trip Report



TO: File

FROM: Cori Burbach, Sustainable Community Coordinator

SUBJECT: Summary re: Santiago, Dominican Republic Trip

DATE: February 8, 2016

From November 16-20, 2015, I traveled to Santiago, Dominican Republic with Environmental Engineer Denise Ihrig as part of the ICMA Planning for Climate Adaptation Program.

The exchange was an opportunity for us to share's Dubuque's experience with climate mitigation and adaptation strategies, and work with Santiago municipal staff and partners to examine opportunities to protect their community from the inevitable impacts of climate change.

The following is a summary of the key observations I had following the visit:

Understanding of current and projected environment/impacts of climate change. Even prior to the trip, as our hosts shared background information with us, it was clear that the City of Santiago has a clear understanding of what climate change will look like for them, and that that understanding is rooted in sound science. We were presented with various studies, maps, plans, etc, that had clearly taken years to develop, that outlined the projected impacts increased rainfall and increased temperatures will have on their community. There is a clear understanding of how these environmental changes will impact housing availability, agriculture production and land use development. There seems to be less emphasis placed on other secondary effects of climate change, such as the impact on public health and emergency planning and response.

One danger in this approach to intensive data collection and analysis is that it can hamper movement towards an implementation phase. I look forward to one of the outcomes of this program being the development and implementation of a strategic plan to adapt to climate change.

Organizational structure and development. This was perhaps the most interesting part of the exchange for me, and it's clear that I still need to learn more about the structure, legal and financial limitations of the country's government, political systems, and operating practices in

order to offer sound advice. Throughout the exchange, it was easy to have discussions of specific infrastructure projects when there were obviously underlying structural and organizational issues hampering the effective implementation of those projects.

Some of those systems-levels issues can be addressed. For instance, one individual from the team we met with stated that while all partners participated in the development of the community's master plan, "just like the plan from the 1970s, and the plan from the 1980s, I don't want this plan to be ignored too." I observed that there was not shared understanding of the role each partner had in implementing the concrete projects identified in the plan. In Dubuque, each department reports to the City Manager, who reports to a City Council that completes a goal-setting process each year. In the absence of such a structure, I observed that there is not shared accountability by Santiago's municipal departments and other key strategic partners to provide for basic needs of residents in a coordinated fashion, a required precursor to addressing climate change impacts.

Other systems-levels challenges, such as the uncertainty that turnover in the political system creates, cannot be addressed as easily, but to the extent that professional management can put processes in place to ensure that momentum is not lost when there is change in political leadership, the implementation process can be greatly improved.

Performance measurement & data-driven decision making. I was pleased when the group presented their sustainability performance measurement system, and would like to learn more about it, especially how they set their thresholds for success. This may be an area to revisit further down the road in this project.

Financial limitations. As we began to talk about needed capital investments, the limitations of sources of funding and ability to borrow became evident. I am interested in exploring alternative financing opportunities that would assist in completing much-needed water, stormwater and wastewater improvements. As was evidenced by the string of projects sitting dormant in the linear park project, completing one project at a time is also important to protect the integrity of capital improvements and make sure they are completed in safe and structurally-sound ways.

Mitigation & adaptation. Most of the conversations we had regarding climate change focused on mitigation efforts, which are extremely important. However, when asked emergency preparedness and response, there was very little information available. Given the demographics and housing stock of the city and rapidly escalating danger during a severe flooding event, a focus on clear communication and evacuation plans as well as long-term response and recovery are important components of an adaptation strategy.

Implementation of planned activity. During our debrief meeting, we had the opportunity to begin to dig into opportunities and solutions with the Santiago team, and I'm eager to hear about their conversations since we left. Denise and I shared two perspectives with them regarding development and implementation of a strategic plan.

1. What is your largest threat and the catalyst project that can bring multiple partners together to achieve and protect your community from it? For Dubuque, that has been the

Bee Branch Watershed Flood Mitigation Project, a project that took ten years to design, secure funding, and change state and federal policies. Implementation of the watershed-wide approach to water quality and quantity will take even longer.

We encouraged the team to think strategically about which partners need to be at the table to make this decision, as having too many decision-makers can often lead to no decisions. Which elements create the decision-making tool that you use to prioritize projects? In Dubuque, that tool is a combination of big-picture guidance (City Council's top priority of the three-part Sustainable Dubuque model, equitable service to residents, a strong financial return on investment, environmental protection) and project-specific requirements or opportunities (meets the legal requirements, creates opportunities for operational savings, leverages private sector investment, investing in the long-term life of a system vs. putting a band-aid on a singular problem).

2. It's easy to become focused on that one project and forget that the entire system (and community) needs investment and maintenance. For both the signature project and the countless other projects in a strategic plan, think about the staging that is required so that there is continuity from one political administration to the next. Think about planning, design, financing, and construction for each project, and layer those activities so that you don't get mid-way through a project and run out of funds, or complete one project and not know what happens next.

As we plan for the Santiago delegation's trip to Dubuque, we would recommend the following two themes drive the agenda, within the climate adaptation context:

1. Strategic planning & continuity across administrations (implementation, prioritization, funding, enforcement)
2. Water systems (drinking water, wastewater, stormwater management)

Additionally, based on conversations we had with staff in Santiago, we hope to have some time to share information with them about the following topics and departments:

1. Energy creation at the Dubuque Metropolitan Area Solid Waste Agency and Water & Resource Recovery Center
2. Emergency Preparedness & Response, and current efforts to incorporate climate adaptation and resiliency into those plans
3. The Jule Public Transit System

In closing, we were impressed by so many things we saw on our trip, and the professionalism and dedication of the staff and partners we met with was evident. In addition to sharing our experiences with them, we brought back information and ideas to share with our Dubuque colleagues. We look forward to hosting the Santiago delegation in Dubuque in April to address the topics outlined above, and others that would be helpful to achieve the goals of this exchange

Attachments: photos (<https://cityofdubuque.sharefile.com/d-sd680b1f975c4e9a8>)

