CityLinks

ICMA
Leaders at the Core of Better Communities

USAID
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CITYLINKS IN REVIEW

Five Years of Fostering Partnerships
2011–2016

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CONTENTS

THE CITYLINKS PREMISE IS A SIMPLE ONE: WELL-MANAGED CITIES ARE THE KEY TO EFFICIENT SERVICE DELIVERY, ECONOMIC GROWTH, SOUND MANAGEMENT OF RESOURCES, AND POLITICAL STABILITY.

PROGRAM BACKGROUND

The ICMA CityLinks™ program was inaugurated in collaboration with the U.S. Agency for International Development (USAID) in 1997 as a means to deliver technical assistance in urban management to cities worldwide. USAID partnered with ICMA to deliver management and strategic guidance for the program.

Known at the time as Resource Cities, the program was established to respond to the impact of economic globalization, accelerated urbanization, and rapid decentralization worldwide—events that prompted USAID to view much of its assistance from an urban perspective.

Based on the success of Resource Cities, USAID awarded ICMA a new five year program with the CityLinks name in 2003 and again in 2011. The CityLinks model was designed by ICMA as a way to enable municipal officials in developing and decentralizing countries to draw on the resources of their international counterparts to find sustainable solutions tailored to the real needs of their cities.

The program leverages the experience and expertise of ICMA's membership of 10,000 local government chief administrators and their professional staffs. 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. And democratic governance is the system by which local citizens hold their elected officials accountable for these outcomes.

WHY PARTNERSHIPS?

Cities and local governments have become a force to be reckoned with on the global stage. As economic engines of the countries in which they reside, their policies and practices have impacts far beyond their geographical borders. Now, more than ever, they have the ability to connect with, collaborate with, and learn from other cities around the world. The impacts of the most pressing global issues are felt most strongly at the local level and are simply too big to face alone.

According to ICMA's 2015 Local Government Sustainability Practices Survey, 78.1% of the local governments surveyed indicated that examples of other municipalities are an important source of information in developing sustainability strategies. In light of this, ICMA is working to create global networks through exchanges and city-to-city partnerships. This allows for technical capacity building as well as increased cultural understanding, resulting in a wealth of opportunities at the local level.

The idea of city-to-city exchange is not a new idea; it has been around for many years, with serious practice beginning after World War II. Exchanges have evolved to become more complex, adding strategic and longer-term objectives. Over the years, ICMA has found that this type of peer-to-peer learning can result in lasting partnerships that go beyond the city-to-city technical exchanges and lead to significant action at the local government level.

Through CityLinks partnerships, individuals who are not only knowledgeable in their field, but also passionate about public service share technical expertise and resources with forward-thinking professionals who seek to broaden their perspective and to learn new skills. These professionals are committed to improving the capacity of their local governments and willing to work to overcome obstacles such as lack of equipment or financial resources, pervasive pessimism, or corruption.

CityLinks partnerships in the past have focused on the range of local government challenges:

- Improving the basic public services provided to citizens—including infrastructure development; water, sanitation, and other environmental management services; and crime prevention and public safety—and putting sustainable solutions in place
- Enhancing local economic competitiveness by identifying opportunities, developing strategies, and planning for implementation
- Creating effective municipal management structures for strategic planning, financial management, performance measurement, citizen participation, and advocacy
- Honing the skills of local government officials to enable them to better carry out their mandates.

In addition to employing the CityLinks model in USAID-funded projects, ICMA has utilized it in programs outside the CityLinks umbrella and in projects funded by other donors. Through all of these programs and projects, ICMA has sought to

- Use innovative and flexible partnership models involving government and nongovernmental counterparts in the United States, host countries, and third countries
- Empower local governments, NGOs, the private sector, and citizens to effect solutions
- Match the skills, knowledge, and resources of the local community with the skills, knowledge, and resources that U.S. partners can share
- Establish substantive professional relationships between U.S. municipal governments and their counterparts in developing and transitioning countries
- Facilitate greater understanding of the mutual benefits that can be derived when community leaders in the United States—and their international partners—achieve sustainable solutions that enhance the capacities of democratic local government.

THE 2011–2016 PROGRAM

The 2011–2016 program had a three-fold purpose, addressing interrelated technical areas that are important in today's rapidly urbanizing world, seeking to:

- Improve climate-related governance and systems in targeted urban areas
- Increase resiliency of cities in Feed the Future focus countries
- Improve water supply and sanitation access in urban communities in Global Health Initiative countries.

At the same time, CityLinks fostered transparency and accountability in budgeting, procurement, hiring, and other municipal practices in each project.

AS A RESULT OF CITYLINKS WORK ALL AROUND THE WORLD, OVER 170 INSTITUTIONS AND MORE THAN 300 STAKEHOLDERS IMPROVED THEIR CAPACITY TO ADDRESS CLIMATE CHANGE ISSUES.

MAJOR ACCOMPLISHMENTS

As a result of CityLinks work all around the world, over 170 institutions and more than 300 stakeholders improved their capacity to address climate change issues. The program has accomplished many things over the past five years, chief among them:

- Representatives from 14 cities across 8 countries gathered in Bangkok for the CityLinks Climate Smart Development Training that served as a culmination of the program. Cities shared lessons learned and were provided with additional tools to continue their work beyond the program end. The coming together of such diverse cities speaks to the sustainability of the network created during CityLinks' five year lifespan.
- The first App2Action Challenge was hosted successfully in Nablus Municipality. The winning application was piloted in the municipality.
- Durban, South Africa established the Central KwaZulu-Natal Climate Change Compact which modelled on that of the Southeast Florida Regional Climate Change Compact.
- La Ceiba, Honduras created a sectoral climate change adaptation planning tool that provides different types of adaptation strategies for land use services in accordance to the required sectoral need or critical systems, including physical infrastructure, social and human systems, natural systems, and economic systems.
- Legazpi City, Philippines created a land use planning tool that provides different types of adaptation strategies for land use purposes including protection, accommodation, retreat, and avoidance.
- Portmore, Jamaica adopted climate education initiatives from Townsville, Australia. These initiatives teach students from elementary to high school how to build sensors that monitor indoor energy consumption and indoor temperatures and why measuring these things is important.
- Semarang, Indonesia signed a Memorandum of Understanding with Diponegoro University, enabling the city to use, develop, and run predictive coastal models and to investigate the city's inundation problems systematically and scientifically.
- Shimla, India adopted standard operating procedures that reflect industry standards and best practices in water distribution and management centers.
- Representatives from 110 local authorities in Tanzania were trained on climate change impacts that and the role local governments can play to help their communities adapt.

A LOOK AT THE NUMBERS 2011-2016

During its five-year lifespan, the CityLinks program leveraged financial and in-kind support from local governments, counterpart organizations, NGOs, and individuals to the benefit of its pilot projects and knowledge sharing activities. Cost-sharing mobilizes additional financial resources to supplement program undertakings, and increases the coverage and effectiveness of USAID's limited budget resources.

Over
$430,000
In total cost share over 5 years

More than
$120,000
worth of time contributed by city managers

$37.4K
WORKSHOPS

$8.5K
WEBINARS

$35.8K
CONFERENCES

CLIMATE PARTNERSHIPS

$174.2K

APP2ACTION CHALLENGE

$27.6K

*Approximately $170,000 worth of cost share falls into categories other than what is listed here.

PILOT PROJECTS OVERVIEW

APP2ACTION CHALLENGE

The App2Action Challenge brought together software developers, designers, and subject-matter experts to develop phone and web-based tools that helped address one of the following water sector challenges in Nablus Municipality:

1. Increasing the efficiency in water distribution
2. Automating communication systems for water management concerns
3. Incentivizing and encouraging on time payment for water services

CHIANG RAI—CAMBRIDGE CLIMATE CHANGE PARTNERSHIP*

The Chiang Rai—Cambridge Climate Change Adaptation Partnership was a knowledge sharing opportunity for the cities of Chiang Rai, Thailand and Cambridge, Massachusetts. Their similarity in topography, climate, and infrastructure risk allowed them to work together to address the impacts of climate change and devise strategies for adaptation. The partnership was established in collaboration with the Association of Southeast Asian Nations (ASEAN). The partnership leveraged $9,216.90 in cost share.

DAR ES SALAAM—DURBAN CLIMATE CHANGE PARTNERSHIP

To support global implementation of the Durban Adaptation Charter, CityLinks fostered a partnership between Dar es Salaam, Tanzania and Durban, South Africa. Experts from Durban worked with officials from Dar es Salaam to identify and address key vulnerabilities in the city in light of climate change, with specific emphasis on sea level rise and coastal management. In conjunction with the CityLinks team, officials from Durban provided capacity building opportunities related to climate change for local government officials in Dar es Salaam. The partnership leveraged $8,431.00 in cost share.

DURBAN—SOUTHEAST FLORIDA CLIMATE CHANGE PARTNERSHIP

The Durban—Southeast Florida Climate Change Adaptation Partnership connected Broward County and Fort Lauderdale, Florida with Durban, South Africa, to address the impacts of climate change and strategies for adaptation. CityLinks facilitated exchange visits that allowed the partners to explore the benefits and challenges of collaborating with nearby jurisdictions to implement regional climate adaptation strategies. The partnership leveraged $15,442.03 in cost share.

PEER-TO-PEER LEARNING CAN RESULT IN LASTING PARTNERSHIPS THAT GO BEYOND CITY-TO-CITY TECHNICAL EXCHANGES AND LEAD TO SIGNIFICANT ACTION AT THE LOCAL GOVERNMENT LEVEL.

HONDURAS PILOT PARTNERSHIP TO STRENGTHEN VIOLENCE PREVENTION THROUGH ENVIRONMENTAL DESIGN*

The cities of La Ceiba and Choloma in Honduras participated in a city-to-city partnership with Los Angeles, California. The pilot applied the CPTED (Crime Prevention through Environmental Design) methodology, which improves the conditions that enhance citizen security while simultaneously addressing risks associated with the effects of climate change.

LA CEIBA—SOMERVILLE CLIMATE CHANGE PARTNERSHIP

The La Ceiba—Somerville Climate Change Adaptation Partnership sought to support the municipality's Sustainable Land Use Plan. Through the help of experts from the Urban Climate Change Research Network, La Ceiba was provided with local climate data that projects temperature, precipitation, and sea level rise. These projections help inform flood plains, potential storm surge scenarios,

heat island effect, and public health implications. The partnership leveraged $10,650.15 in cost share.

LEGAZPI CITY—FORT LAUDERDALE CLIMATE CHANGE PARTNERSHIP

The Legazpi City—Fort Lauderdale Climate Change Adaptation Partnership created a peer-to-peer learning opportunity between the cities through interactive training, knowledge sharing conferences, exchange trips, and virtual advice from climate specialists about developing climate-resilient approaches. Legazpi City, Philippines collaborated with Fort Lauderdale, Florida to produce climate change adaptation strategies designed to strengthen urban resiliency. The partnership was established in collaboration with the Association of Southeast Asian Nations (ASEAN). The partnership leveraged $40,882.51 in cost share.

PORTMORE—TOWNSVILLE CLIMATE CHANGE PARTNERSHIP

The Portmore—Townsville Climate Change Adaptation Partnership combined a science-based approach with practical application in order to support Portmore in its preparation for future climate change impacts. The city of Townsville, along with experts from the Urban Climate Change Research Network provided technical assistance to Portmore through a series of exchange trips and virtual knowledge sharing events, giving municipal officials the opportunity to create and hone disaster preparedness and management and sustainable development plans. The partnership leveraged $3,221.20 in cost share.

SEMARANG—GOLD COAST CLIMATE CHANGE PARTNERSHIP

The Semarang—Gold Coast Climate Change Adaptation Partnership married data-driven solutions and municipal coastal planning through technology, modelling, and software training. The city of Gold Coast, along with experts from the Urban Climate Change Research Network provided technical assistance to Semarang through a series of exchange trips and virtual knowledge sharing events. The partnership leveraged $80,900.00 in cost share.

SHIMLA—BOULDER CLIMATE CHANGE PARTNERSHIP

The Shimla—Boulder Climate Change Adaptation Partnership brought together two cities similar in topography and climate risks to focus on water supply and distribution challenges that are compounded by rapid urbanization, unregulated infrastructure, and changing rainfall patterns. The City of Boulder, along with experts from the Urban Climate Change Research Network provided technical assistance to Shimla through a series of exchange trips and virtual knowledge sharing events. The partnership leveraged $5,460.49 in cost share.

ASSOCIATE AWARDS

These projects fall outside of the main CityLinks program but were funded under the same umbrella.

78.1% LOCAL GOVERNMENTS SURVEYED SAY EXAMPLES OF OTHER MUNICIPALITIES ARE AN IMPORTANT SOURCE OF INFORMATION.

CLIMATE-SMART LOW-CARBON CITIES PROJECT

The Climate-Smart Low-Carbon Cities (CSLCC) project is designed to provide four Chinese cities access to the skills, tools and support they need to implement effective plans for large-scale GHG reductions. Over 18 months, the project will promote U.S.-China exchange on best practices in urban sustainability. The CSLCC team will assess the low-carbon development plans, commitments and capacity needs of the participating cities and provide practical, highly customized support to the cities in the form of international city exchanges, customized technical trainings, capacitating activities and technical assistance on developing and executing climate action plans.

WASTE MANAGEMENT TECHNOLOGY IN REGIONS PROJECT

ICMA is assisting the government of Georgia in designing adequate waste management and recycling systems in the Kakheti and Adjara regions. The Waste Management Technology in Regions project includes pilots in selected municipalities to support a cleaner and healthier environment, minimize adverse impacts from waste on human health and natural resources such as air, water, soil, and biodiversity, and reduce greenhouse gas emissions from landfills.

**These projects where truncated by circumstances beyond program control. No results to report.*

CITYLINKS RESOURCE LIBRARY MATERIALS GUIDE

Over the life of the program, CityLinks has created a variety of tools and materials based on its three themes and outcomes from partnership and trainings. This materials guide provides a snapshot of what's included in the CityLinks Resource Library and how to access it. All of the resources listed here can be downloaded for free by visiting http://icma.org/en/cl/resources.

APP2ACTION HOSTING GUIDE

The App2Action Hosting Guide provides USAID Missions and local governments with practical, step-by-step information needed to host a smart application challenge. The pilot held in Nablus is featured as real life examples throughout the guide.

CITYLINKS PRIMER ON SUBNATIONAL APPROACHES FOR LOW EMISSION, CLIMATE RESILIENT DEVELOPMENT

The Primer is an introduction to the key principles and practices of low carbon, climate resilient development. It includes resources and organizations which provide more in-depth guidance on planning and implementation. It was built around examples of best practices in cities in developing countries, where the term cities applies broadly to government levels below the national level, including regional, state, provincial, district, and city levels.

CITYLINKS CLIMATE SMART DEVELOPMENT TRAINING CURRICULUM

The CityLinks Climate Smart Development Training was held in Bangkok Thailand in May of 2016. The training drew from and articulated the themes in the CityLinks Primer on Subnational Approaches for Low Emission, Climate Resilient Development. Emphasis was put on: low emissions development strategies; climate resilient development strategies; green growth; and implementation challenges and approaches. The training curriculum used case studies from participant cities along with facilitated discussions to allow participants to learn from the experience of those in the room as well as experiences from cities highlighted in the Primer.

COASTAL ENGINEERING WORKSHOP CURRICULUM

The Durban Adaptation Charter (DAC) Coastal Engineering Workshop was held in Dar es Salaam, Tanzania in November of 2014. The curriculum is designed for civil engineers dealing with coastal erosion as a result of climate change. The curriculum is based on a publication by the World Association for Waterborne Transport Infrastructure, titled Countries in Transition: Coastal Erosion Mitigation Guidelines.

CLIMATE LEADERSHIP ACADEMY RESOURCE GUIDE

The CityLinks Climate Leadership Academy on Urban Climate Adaptation and Infrastructure: From Risk Barriers to Results was held in Jakarta, Indonesia in August of 2013. This Resource Guide represents a synthesis of information selected for the participating practitioners. The Resource Guide is intended to help practitioners in cities and metropolitan areas resolve local challenges related to managing the social, political, environmental and financial risks of urban infrastructure to improve climate adaptation and urban resilience, by showcasing promising practices and by providing efficient access to some of the very best information and resources available.

CLIMATE POLICY PLANNING MATRIX—LEGAZPI CITY

This Excel-based matrix is a decision support tool to enable city staff to communicate amongst themselves and with higher level decision makers around climate impacts, policy implications, adaptation strategies, and potential design or program strategies to support the adaptive strategy. It was created for Legazpi City, Philippines as part of the CityLinks Climate Adaptation Partnership between Legazpi City and Fort Lauderdale, Florida.

COUNTRY-SPECIFIC RESOURCES

Certain partnerships developed resources that are relevant only to beneficiary cities such as climate projections, coastal models, and city assessments. These include cities in India, Jamaica, Indonesia, Honduras, and Peru.

KATRINA. SANDY. THE DESTRUCTION AND LOSS OF LIFE CAUSED BY THESE TWO STORMS HAVE ALTERED THE WAY CITY MANAGERS THINK ABOUT THE IMPACT OF CLIMATE CHANGE ON INFRASTRUCTURE.

EYE ON CLIMATE CHANGE: STRATEGIES TO HELP MANAGERS CONFRONT THE CHALLENGES—PM MAGAZINE

Public Management (PM) is the official magazine of ICMA, with a track record of more than 90 years as a trusted source of local government management information. PM is dedicated exclusively to the public sector practitioner. Designed for quick and informative reading, articles deal with issues of common concern to local government managers. PM's circulation of 9,500 includes ICMA members, and individual subscribers. The print version of PM is published 11 times a year.

Appearing as a featured article in the October 2016 issue, Eye on Climate Change shares practical advice for managers hoping to confront the challenges by highlighting the work of CityLinks cities.

CITYLINKS FEATURED INNOVATORS SERIES

The Featured Innovators Series consists of once-monthly features that provide an in-depth look at innovators working in the climate, water, and food security space. The nine selected innovators included organizations or individuals creating new and different tangible solutions that help solve problems in these sectors at the local level.

URBAN INTERSECTIONS WHITE PAPER

CityLinks partnered with the RUAF Foundation-International Network on Urban Agriculture and Food Security to present a two-part webinar series illustrating local government responses to the interlinked sectors of climate change, food security, and water. The series explored examples from Nashik, India; Rosario, Argentina; New York City, New York; and Toronto, Canada preceded by an overview from UN Habitat and GIZ-German Development Corporation. This paper comes as a companion to this series by summarizing the presentations and discussions generated by the webinar. It concludes with some concrete recommendations to bilateral donors, sub-national governments, and support organizations to integrate the pioneering experiences of these cities in their own programs and policies.

URBAN INTERSECTIONS FACT SHEET SERIES

Highlighting important statistics on the linkages between climate change, food security, and water in urban settings, these fact sheets supplement the two-part webinar series CityLinks presented in partnership with the RUAF Foundation-International Network on Urban Agriculture and Food Security.

WEBINARS

SUBNATIONAL APPROACHES TO LOW CARBON, CLIMATE RESILIENT DEVELOPMENT

Today's cities face unprecedented challenges to their sustainable development as a result of rapidly expanding populations, rising greenhouse gas emissions, and the increasing effects of climate change.

Many city leaders now recognize that a sustainable growth pathway is not possible without addressing these challenges, and yet their remains limited information on cost-effective ways to reduce urban GHG emissions (mitigation) and the vulnerability of urban dwellers, infrastructure, and public services to climate change (adaptation).

This webinar will help address this information gap by providing an overview of approaches that cities can use to enhance mitigation and adaptation in the context of sustainable development goals. The webinar will introduce a new CityLinks Primer on Subnational Approaches to Low Emission, Climate Resilient Development and present a number of case studies to highlight the most promising approaches.

URBAN INTERSECTIONS PART 1—FOOD SECURITY, WATER, AND CLIMATE CHANGE

In order to ensure more sustainable urban development, cities and metropolitan regions need to respond to the triple challenge of ensuring adequate access to sufficient water, energy, and food for their population; sustaining local economic development; and sustainably managing resources while addressing the challenges of climate change adaptation and mitigation.

Join Carmen Vogt (GIZ), Nevin Cohen (City University of New York), and Emani Kumar (ICLEI) for a one hour panel discussion on promising approaches local and metropolitan governments can use to connect urban food security, water and sanitation, and climate change

strategies and programs in the context of sustainable development goals and the shaping of a New Urban Agenda. The discussion is followed by an audience Q&A, moderated by Marielle Dubbeling (RUAF Foundation).

URBAN INTERSECTIONS PART 2—CLIMATE CHANGE AND FOOD SECURITY

Cities, and their sheer number of inhabitants, are increasingly affected by climate change. According to the Intergovernmental Panel on Climate Change-IPCC Fifth Assessment Report (University of Cambridge and ICLEI, 2014) key impacts include rising temperatures, increasing rainfall, flooding and urban food insecurity. Negative climate change impacts on food production and productive arable lands will impact cities with heavy reliance on food imports. The urban poor will be most affected by disruptions in food supply and increasing food prices.

The IPCC also highlights that adaptation options exist in areas such as water, food, energy and transport. These include support for urban and peri-urban agriculture, green roofs, local markets, enhanced social (food) safety nets and development of alternative food sources.

Join Rafael Tuts (UN-Habitat), Rubén Piacentini and Marcelo Tenaglia (Municipality of Rosario, Argentina), and Lauren Baker (Toronto Food Policy Council) for a one hour panel discussion on promising approaches local and provincial governments are putting in place. It will be followed by a 30 minute audience Q&A, moderated by Marielle Dubbeling (RUAF Foundation).

EXPLORING PRINCIPLES AND PRACTICES OF SUSTAINABLE SERVICE DELIVERY

By 2030, an additional 1.5 billon people will live in urban areas and most of this growth will occur in developing countries.

Join Dr. Sean O'Donoghue (Manager of the Climate Change Adaptation Branch in eThekwini Municipality, Durban, South Africa), Tim Campbell (author of Beyond Smart Cities: How Cities Network, Learn, and Innovate), and Jeffrey Szuchman (AAAS Science and Technology Policy Fellow at the United States Agency for International Development) for a one hour panel discussion about how cities are addressing the challenges associated with rapid urbanization. You will learn about the development and implementation of USAID's new urban policy, Sustainable Service Delivery in an Increasingly Urbanized World; how Durban, South Africa, is developing a regional approach to addressing climate change in a major urban area; and examples of cities learning from each other to address rapid urbanization and other challenges.

COASTAL RESILIENCE

Coastal communities are among the most vulnerable areas impacted by the effects of climate change. Prone to sea-level rise, land erosion, and coastal flooding, it has become crucial for these cities to develop climate-resilient plans to protect their communities.

Join Dr. Ben Strauss (Climate Central), Lee Jay Feldman (Southern Maine Planning and Development Commission), and Jonathan Cook (Global Climate Change Team at the United States Agency for International Development) to hear about the effects of climate change and how to better protect your coastal community. You will learn about: the latest technology for analyzing the effects of sea level rise; case studies from coastal communities in Maine; and examples of infrastructure built to withstand the impacts of climate change in international cities.

COASTAL COMMUNITIES ARE AMONG THE MOST VULNERABLE AREAS IMPACTED BY THE EFFECTS OF CLIMATE CHANGE.

BUILDING URBAN ADAPTATION TO CLIMATE CHANGE

Katrina. Sandy. The destruction and loss of life caused by these two storms have altered the way city managers think about the impact of climate change on infrastructure. Local and state leaders are seeking more resilient solutions that are adapted to local impacts.

Join Susanne Torriente (Assistant City Manager, Ft. Lauderdale, Florida), Douglas Meffert (Vice President and Executive Director, National Audubon Society in Louisiana), and Eron Bloomgarden (Partner, EKO Asset Management Partners) for a one hour panel discussion on how cities around the world are fostering locally-driven support and innovation to adapt cities to climate change. You will learn about case studies from Super Storm Sandy and Hurricane Katrina about adapting to climate change; how to finance climate change adaptation; and lessons learned on how to engage your community in climate change adaptation efforts.

CityLinks ICMA Leaders at the Core of Better Communities USAID FROM THE AMERICAN PEOPLE

LEGAZPI CITY, PHILIPPINES + FORT LAUDERDALE, FLORIDA

ESTABLISHED IN 1948, the City of Legazpi is in many ways an epicenter of innovative resilience activities in the Philippines. In 2006, a large landslide from a major volcano, Mount Mayon, and two cataclysmic typhoons affected hundreds of thousands, killing 755. The impacts of climate change threaten to add to the list of vulnerabilities facing Albay Province in the future. In recent years, sea level rise and increased incidence of severe weather events, coupled with variability in temperature and precipitation patterns, have led to greater storm surge and severe flooding.

Since assuming office in 2007, Governor Joey Salceda has championed a "Zero Casualty" plan, which combines disaster risk reduction (DRR) and climate change adaptation (CCA) activities. In response, Legazpi leveraged private financing as well as government and international funds for the integrated disaster risk reduction and climate adaptation activities. To maintain a sustained level of investment, they linked their climate adaptation plan with city legislation, a move that reduced the risk that investments may be de-prioritized by the city.

Still, Legazpi has many challenges ahead, including integrating climate models into future scenarios, the desire to expand the tourism portion of its economy, and adapting to increasing pressures of urbanization.

PARTNERING ON SHARED CLIMATE CHALLENGES

Legazpi and Fort Lauderdale share similar climate challenges including flooding, sea level rise, hurricanes and typhoons, coastal erosion, and storm water management. Because Fort Lauderdale had already begun to implement innovative approaches to mitigate the adverse effects of climate change, the CityLinks team felt that it was an ideal partner community for Legazpi. Fort Lauderdale also demonstrated the positive economic impacts adaptation approaches can have on tourism and in securing investments from private industry.

RESULTS

1. **Creation of land use planning tool** that provides different types of adaptation strategies for land use purposes including protection, accommodation, retreat, and avoidance.

2. **Key technical staff at the city and provincial level trained** in the policies and programs that address climate impacts in key land use areas.

3. **Provided city land use planning staff with data requirements** and steps to take o begin scenario mapping for sea level rise.

4. **City, provincial, and regional representatives have increased their capacity to adapt to climate change** and have a broader understanding of long term impacts of climate change.

5. **Lessons learned through the partnership shared** with municipalities throughout the Philippines and the ASEAN region.

LEGAZPI CITY, PHILIPPINES + FORT LAUDERDALE, FLORIDA

DIAGNOSTIC ASSESSMENT: **IDENTIFYING CHALLENGES**

- Planning and hazard maps informed by previous events without integration of climate projections.
- Dependence on hard infrastructure for flood solutions
- Need for additional climate adaptive land use strategies
- Integration of sea level rise projections into urban and disaster risk management plans

TECHNICAL EXCHANGE: **SHARING BEST PRACTICES**

- Integrated storm water management
- Adaptive strategies for community based land use planning
- Disaster risk reduction and management with emphasis on early warning systems
- Wetlands restoration
- Green infrastructure
- Sea level rise modeling and scenario planning
- Regional climate governance models

WORK PLANNING: **CREATING ACTIONABLE PROGRESS TOWARD LOCALIZED ADAPTATION MEASURES**

OBJECTIVE

Support Zero-Casualty Policy with the development of scenario based maps to help inform land use plans and hazard maps

ACTIVITY 1

Training and technical GIS support to create scenario based maps that can be used to identify vulnerable areas

ACTIVITY 2

Determine appropriate sea level rise scenarios and map next steps to go from scenarios to projections

ACTIVITY 3

Create a work plan for physical and policy recommendations for the improvement of the city's land use plan

CROSS-CUTTING RECOMMENDATIONS AND LESSONS LEARNED

1. Cities must begin to integrate climate projections into hazard maps to better understand future threats instead of relying on historical data.

2. Access and dissemination of data is critical to local governments' ability to make informed decisions across sectors to ensure climate resilient development.

3. Building capacity at the local level in geospatial reasoning and analysis enhances better service delivery across sectors and easily allows climate data to be integrated into planning.

4. Building relationships through city-to-city partnerships is key for long term knowledge sharing creating catalysts for change between partnered cities.

LEGAZPI CITY, PHILIPPINES + FORT LAUDERDALE, FLORIDA

FRONT

(TOP) Mayor Noel Rosal of Legazip city along with his staff pose for a photo in front of Legazpi's pumping station with Nancy Gassman, Fort Lauderdale's Assistant Public Works Director and Michael Crowley from the Institute for Sustainable Communities.

(BOTTOM) Joseph Esplana, head of planning for Legazpi City speaks with an engineer from Fort Lauderdale about the city's pumping schemes.

BACK

(TOP) Jim Hetzel and David Rubin from the City of Fort Lauderdale, and Jessica Johnston from ICMA, on the Legazpi City boardwalk in the Philippines.

(BOTTOM) Legazpi City's planning department welcomes the CityLinks team made up of ICMA and Fort Lauderdale staff.

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SHIMLA, INDIA + BOULDER, COLORADO

THE CITY OF SHIMLA was settled by the British and was declared the Summer Capital of the British India in 1864. It is a rapidly urbanizing town located in the tectonically alive and high seismic risk zone in the Lesser Himalayan ranges of the State of Himachal Pradesh in India. Shimla evolved from a small hill settlement to one of the largest towns situated in the Himalayan mountains of India. In recent years, Shimla experienced rapid but mostly unplanned urban growth which is increasing the susceptibility of the community to climate change impacts.

Climate projections for Shimla show the potential for further rainfall variability and increase in temperature which may affect the ecosystem services, particularly the availability, supply and quality of freshwater; and increase the vulnerability of urban systems to climate change induced natural risks, specifically high intensity rainfall, flash-floods, slope failures landslides, droughts causing loss of life, and devastation of property, urban services, infrastructure, livelihood and health of people, particularly that of marginalized and poor households.

Recognizing these risks, the Shimla Municipal Corporation is actively working to protect its infrastructure and natural resources to adapt to and minimize the impacts climate change will have on fresh water supplies.

PARTNERING ON SHARED CLIMATE CHALLENGES

As two mountain cities with similar climate vulnerabilities, Boulder, Colorado and Shimla, India were paired to address climate impacts on fresh water resources. Climate change impacts have big implications for both Boulder and Shimla. Working with Urban Climate Change Research Network scientist, Dr. Prakesh Tiwari, staff from Boulder assisted Shimla create a region-specific understandings of how water resources will be impacted by changes in temperature and precipitation.

RESULTS

1

Adoption of standard operating procedures that reflect industry standards and best practices in water distribution and management centers in Shimla.

2

Design and launch of a water conservation campaign that included a logo, message and marketing strategy to increase awareness and induce behavior change to reduce water usage and loss.

3

Development of a climate scenario planning tool that encourages community participation and engagement in creating short-term no/low-regrets strategies that recognize an uncertain future.

4

Finalized recommendations to create more climate resilient water supply through a source to tap assessment that will address the reduction in water loss currently estimated at 25–40%.

SHIMLA, INDIA + BOULDER, COLORADO

DIAGNOSTIC ASSESSMENT: **IDENTIFYING CHALLENGES**

- Shimla faces 25–40% non-revenue water loss
- Water quality concerns manifested in public health crises
- Inability to store and capture water in light of more intense and erratic rain events resulting from climate change
- Need for structured planning approach in light of future climate scenarios

TECHNICAL EXCHANGE: **SHARING BEST PRACTICES**

- Recommended standard operating procedures for water resource management facilities
- Site visits to areas that support no/low-regrets design strategies for flood events and storm water retention
- Pipe repair technology shared that allows for an alternative to replacement to fixing repairs

WORK PLANNING: **CREATING ACTIONABLE PROGRESS TOWARD LOCALIZED ADAPTATION MEASURES**

OBJECTIVE

Support the development of local climate-risk assessments and provide technical guidance to prioritize actions that protect fresh water resources from climate impacts.

ACTIVITY 1

Assess Shimla's water schemes to identify low cost opportunities for savings. Outline and prioritize recommendations for the municipal corporation that will ensure more climate resilient water resource infrastructure.

ACTIVITY 2

Engage municipal staff and community stakeholders in a capacity building workshop around climate resilient water resources, and scenario planning for Shimla's climate future.

CROSS-CUTTING RECOMMENDATIONS AND LESSONS LEARNED

1. Mitigating water loss can be as important as considering new water supplies that will be needed in light of climate change.
2. Community engagement is critical to creating a culture that values water quality equally with water quantity to ensure more climate resilient water resources.
3. Local governments don't need perfectly downscaled climate models to begin scenario planning and developing low/no-regrets strategies.
4. Cities must recognize that climate change also means water change and begin to plan and adapt accordingly.

SHIMLA, INDIA + BOULDER, COLORADO

FRONT

(TOP) Delegates from Shimla with city council members from Boulder Colorado.

(BOTTOM) The CityLinks team with municipal staff in Shimla looking at the impacts of erosion and heavy rainfall overtime on the mountainside near Shimla's city center.

(LOGO) Campaign developed in conjunction with Boulder to encourage water conservation in Shimla.

BACK

Delegation from Shimla discussing ecosystem services with a wild life and natural resources expert from Boulder.

CityLinks ICMA Leaders at the Core of Better Communities USAID FROM THE AMERICAN PEOPLE

DURBAN + DAR ES SALAAM

SITUATED ON THE EAST COAST OF TANZANIA, Dar es Salaam is the economic hub of the country. Its large natural harbor is regionally significant and serves a number of land locked countries in-land of Tanzania. In the 2012 National Census Dar es Salaam was recorded as having a population of 4,364,541 people. However it is estimated that Dar es Salaam's population is growing at a rate of 5.6% annually through a combination of natural population growth and high levels of migration from the inland areas of Tanzania. As a result Dar es Salaam's current population is likely to be over 4,800,000.

In addition to the stress of rapid growth it is estimated that 70% of the population live in unplanned settlements. The extensive unplanned settlements are difficult to service and are often located in areas that have become even more vulnerable as a result of climate change. Dar es Salaam has seen an increase in the intensity of rainfall as well as extended rainy seasons that have had major implications for public health and local government service delivery.

Other climate vulnerabilities include sea level rise and beach erosion that is threatening critical infrastructure. As a signatory of the Durban Adaptation Charter, CityLinks partnered Durban with Dar es Salaam to work together on strategies and capacity building activities to help the city better prepare for climate change.

PARTNERING ON SHARED CLIMATE CHALLENGES

While Durban and Dar es Salaam were partnered due to the similar demographic and climate challenges they face, participants from Dar es Salaam wanted to ensure that lessons learned from the exchange were spread beyond their municipal boarders. CityLinks reached out to the Association of Local Authorities in Tanzania (ALAT), to put together a broader workshop to better understand municipal climate challenges nation wide and provide training to municipal leaders.

RESULTS

1

Representatives from 110 local authorities in Tanzania received training on climate change specifically related to the impacts that Tanzania will face and the role local governments can play to help their communities adapt.

2

12 municipal engineers from across Tanzania received training on combatting coastal erosion and adapting coastal management practices in light of climate change.

3

Municipal authorities in Tanzania committed to working through ALAT to create coordination mechanisms to share lessons learned and build capacity around local climate action that support national climate change policies and legislation.

DURBAN + DAR ES SALAAM

DIAGNOSTIC ASSESSMENT: **IDENTIFYING CHALLENGES**

- Dar es Salaam's ability to provide essential services to vulnerable populations is at risk and will be exacerbated by future climate impacts such as flooding, sea level rise, and coastal erosion.
- Municipal staff lack the capacity to address climate change which has yet to be mainstreamed across departments.
- Informal settlements increasing the vulnerability of already at risk populations.

TECHNICAL EXCHANGE: **SHARING BEST PRACTICES**

- Delegates from Dar es Salaam were exposed to Durban's efforts to integrate climate change across sectors in local government.
- Visits to coastline in Durban to demonstrate municipal climate adaptation measures such as setback lines, dune rehabilitation, and beach renourishment.
- Durban's community engagement model that involves local communities in environmental management projects.

WORK PLANNING: **CREATING CAPACITY BUILDING OPPORTUNITIES FOR MUNICIPAL STAFF IN TANZANIA TO RECOGNIZE AND PLAN FOR CLIMATE VULNERABILITIES IN THEIR COMMUNITIES**

OBJECTIVE

Increase the capacity of municipal staff to deal adapt to climate change in Dar es Salaam, and Tanzania at large, through the Association of Local Authorities in Tanzania.

ACTIVITY 1

Provide an overview of promising adaptation practices to municipal officials from Dar es Salaam through an exchange visit to Durban.

ACTIVITY 2

Develop a coastal engineering curriculum looking at adaptive coastline management practices and execute a workshop for municipal engineers in Tanzania.

ACTIVITY 3

Work with ALAT to provide climate change training to municipal leaders across Tanzania.

CROSS-CUTTING RECOMMENDATIONS AND LESSONS LEARNED

1. Local government associations create valuable entry points for capacity building activities related to climate change and can provide platforms for coordination and knowledge sharing.
2. Empowering municipal engineers with climate change knowledge is key to ensuring infrastructure investments are climate resilient.
3. Creating training opportunities for both practitioners and city leadership ensure climate change is prioritized and operationalized across departments.
4. Practitioners from similar circumstances relate well to each other increasing the chances for increased knowledge and behavior change.

DURBAN + DAR ES SALAAM

FRONT

(TOP) Staff from Dar es Salaam with CityLinks staff assessing a crumbling sea wall and a coastline diminishing from erosion.

(BOTTOM) CityLinks staff and a delegation from Durban touring mangrove restoration areas outside of Dar es Salaam.

BACK

(TOP) Mussa Natty, Municipal Director Kinondoni Municipality in Dar es Salaam explaining the challenges his community is facing with regard to coastal erosion to staff from Durban.

(BOTTOM) Dr. Andrew Mather pointing out the changing coastal area in Dar es Salaam. What was once completely underwater now drained from man-made interventions and environmental changes.

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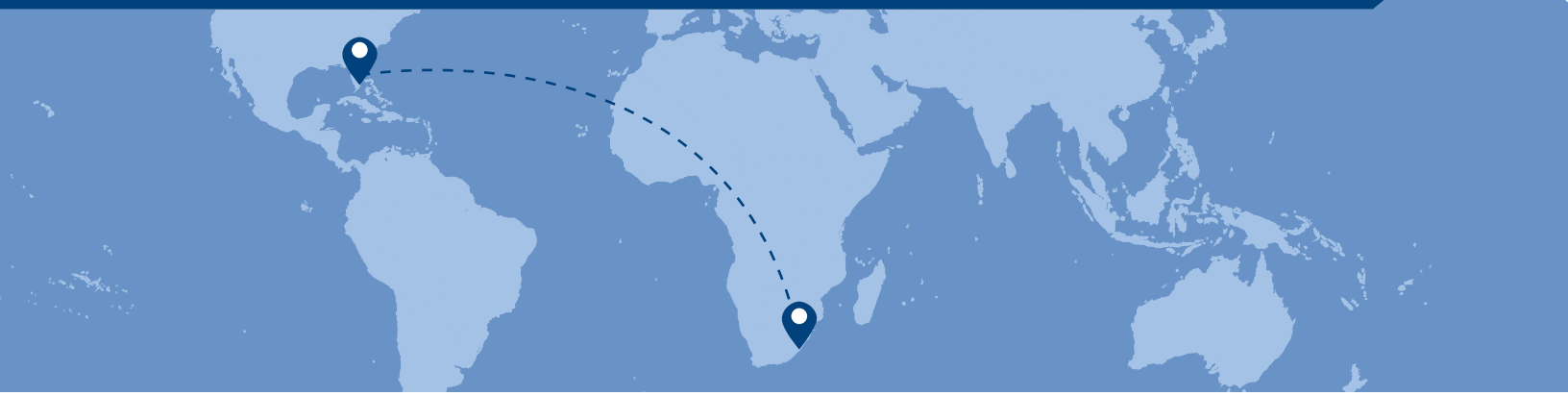
DURBAN, SOUTH AFRICA + SOUTHEAST FLORIDA



RECOGNIZING DURBAN AS A GLOBAL LEADER in ecosystem-based adaptation at the municipal level, CityLinks hoped to build on the reach of the DAC through city partnerships. The DAC was formed at the United Nations Framework Convention on Climate Change (UNFCCC) seventeenth session of the Conference of the Parties (COP 17) in Durban in December 2011. The charter commits local governments to assist their communities in responding to and coping with climate change risks to reduce vulnerability.

Yet even with the success of the DAC, Durban struggled with how to mitigate the adverse effects on their environment that originated outside of their municipal jurisdiction. Interested in how they might regionalize their efforts to mitigate sea-level rise and increase biodiversity and ecosystem services, Durban looked to ICMA's CityLinks program.

CityLinks introduced Durban to ICMA members in Fort Lauderdale to learn more about the Southeast Florida Regional Climate Compact. Established in 2009, the Compact includes four counties representing 5.8 million people (Broward, Miami-Dade, Monroe, and Palm Beach). The Compact represents an ongoing collaborative effort among the Compact Counties to foster sustainability and climate resilience at a regional scale.

PARTNERING ON SHARED CLIMATE CHALLENGES

As two coastal cities with similar climate vulnerabilities, Durban was paired with Fort Lauderdale and Broward County, Florida to explore the feasibility of regional governance models that address climate change.

RESULTS

As a direct result of the exchange visits, the city of Durban has established its own Central KwaZulu-Natal Climate Change Compact modelled on that of the Southeast Florida Regional Climate Change Compact. The CKZNCCC is a partnership between the twelve local and district municipalities in Central KZN. It provides a platform for an integrated response to climate change and for members to engage and learn from each other and to access opportunities as a unit. By collaborating on their climate change response, Compact members are able to develop bankable adaptation projects with benefits that transcend each member's municipal boundary.

DURBAN, SOUTH AFRICA + SOUTHEAST FLORIDA

DIAGNOSTIC ASSESSMENT: IDENTIFYING CHALLENGES

- Durban faces challenges with sea level rise and coastal erosion but does not have jurisdiction of entire coastline or relevant catchment areas.
- Surrounding municipalities have fewer financial and human resources to dedicate to climate change initiatives.
- Without regional cooperation environmental "wins" are often undermined by lack of coordination and communication.

TECHNICAL EXCHANGE: SHARING BEST PRACTICES

- Meetings to discuss the genesis of the South East Florida Climate Compact, how to garner support, and operational successes and challenges.
- Visits to storm water management facilities to demonstrate regional efforts.
- Overview of coordinated sea level rise projections and how they are utilized across counties.

WORK PLANNING: CREATING A REPLICABLE AND OPERATIONAL CLIMATE COMPACT MODEL

OBJECTIVE

Support the development of a regional climate governance model that is responsive to the needs of Durban and the surrounding municipalities.

ACTIVITY 1

Work with key staff to identify steps required to establish a regional climate compact. Study the Southeast Florida example from a governance and technical perspective to assess replicability.

ACTIVITY 2

Outline a plan to operationalize the Central Kwazulu Natal Climate Compact. Assess the feasibility in the Durban context, and identify potential capacity building opportunities for participating municipalities.

CROSS-CUTTING RECOMMENDATIONS AND LESSONS LEARNED

1. Climate change knows no political boundaries, organized regional cooperation and planning are critical for successful adaptation projects.
2. Working regionally encourages knowledge sharing across jurisdictions and departments that can lead to process improvements and efficiencies.
3. Regional collaboration brings more attention to critical environmental and infrastructure needs, that if addressed can lead to wider benefit and additional funding sources.

DURBAN, SOUTH AFRICA + SOUTHEAST FLORIDA

FRONT

(TOP) CityLinks staff and a delegation from Durban, South Africa hearing from staff in Broward County Florida on beach re-nourishment efforts.

(BOTTOM) Staff from Durban touring the Fern Forest Nature Center in Broward County. The center served as a demonstration of urban conservation efforts, as well as an area that cancombat heat island and retain flood waters.

BACK

(TOP) Staff from Fort Lauderdale showcasing projected sea level innudation maps to staff from Durban, South Africa.

(BOTTOM) Staff from Broward County demonstrate the engineering behind complex pumping systems that are one part of the county's broader water resource management efforts.

CityLinks ICMA Leaders at the Core of Better Communities USAID FROM THE AMERICAN PEOPLE

LA CEIBA, HONDURAS + SOMERVILLE, MASSACHUSETTS

LOCATED ON THE CARIBBEAN COAST of Honduras, La Ceiba is the third largest city in Honduras. It was founded in 1835. La Ceiba's location makes it geographically unique; it lies in an alluvial floodplain area between a mountain range and the Caribbean Sea.

The city of La Ceiba faces a complex scenario; challenges associated with a growing urban population and the city's geographic location make it city highly vulnerable to the impacts of climate change. A combination of climate-related and anthropogenic threats put the city at risk for damaged infrastructure and lower quality of life for the population that could even lead to the loss of human lives.

The municipality has an environmental management unit (Gerencia Ambiental Municipal- GAM) whose role is to enforce the National Environmental Law and its regulatory framework within the municipality. The GAM coordinates with the central government and the Ministry of Environment (MiAmbiente+) for the authorization and licensing of new projects and construction as well as investigating environmental complaints from the citizens, among other duties. Due to efforts by the central government to decentralize major governance roles, the GAM is not entirely responsible for regulating common resources within the boundaries of the municipality (i.e. forest exploitation, mining activities) which often creates conflicts and hinders its effectiveness at preventing environmental damages.

The local government is particularly interested in addressing these issues, which creates a window of opportunity to develop planning exercises and enforce regulations. In order to capitalize on this, the Municipal Corporation and its technical staff need to increase their understanding of climate change. Currently, there is a vague understanding of the expected impacts of climate change in the mid- and long-term which further increases uncertainty and hinders concrete action.

RESULTS

1

Creation of a sectoral climate change adaptation planning tool that provides different types of adaptation strategies for land use services in accordance to the required sectoral need or critical systems, including physical infrastructure, social and human systems, natural systems, and economic systems.

2

Municipal decision makers, technical staff and civil society have increased their capacity to adapt to climate change and have a broader understanding of long term impacts of climate change.

3

Municipal key technical staff supported to leverage national response and financing for upcoming steps to adjust current land use plan while considering climate change projections/adaptation.

LA CEIBA, HONDURAS + SOMERVILLE, MASSACHUSETTS

DIAGNOSTIC ASSESSMENT: IDENTIFYING CHALLENGES

- Inadequate infrastructure for storm and waste water management
- Decentralized decision making for high-impact environmental projects
- Lack of land use planning and zoning
- Poor environmental governance
- Need to adjust land use plan and implement
- Integration of climate projections into urban and disaster risk management plans

TECHNICAL EXCHANGE: SHARING BEST PRACTICES

- Integrated storm and waste water management
- Adaptive strategies for community based land use planning
- Integration of strategies and planning into City processes
- Protection of green infrastructure
- Identify green economy
- Regional climate governance models

WORK PLANNING: CREATING ACTIONABLE PROGRESS TOWARD LOCALIZED ADAPTATION MEASURES

OBJECTIVE

Strengthen the decentralization of environmental governance based on climate change adaptation awareness and strategical guidance to support decision making in land use planning.

ACTIVITY 1

Disseminate the understanding of climate projections and the need for Climate Change Adaptation measures

ACTIVITY 2

Prioritize local threats in accordance to most vulnerable geographical areas and identify vulnerabilities and adaptation alternatives

ACTIVITY 3

Create an adaptation guide and planning tool for physical and policy recommendations for the improvement of the city's land use plan

CROSS-CUTTING RECOMMENDATIONS AND LESSONS LEARNED

1. Cities that are not fully developed must first address their current problems and plan strategically for future development.

2. Access and dissemination of data is critical to local governments' ability to make informed decisions across sectors to ensure climate resilient development.

3. Building capacity at the local level about green and grey infrastructural solutions for climate change adaptation can resolve current issues and support resilient growth.

4. Building relationships through city-to-city partnerships is key for long term knowledge sharing creating catalysts for change between partnered cities.

LA CEIBA, HONDURAS + SOMERVILLE, MASSACHUSETTS

FRONT

(TOP) During the first exchange trip to La Ceiba, municipal engineer, Luis Zelaya explained and showed their coastal erosion situation to Oliver Sellers-Garcia and to Erika Tenorio, the program's UCCRN affiliate. Most of La Ceiba's coast is eroded. Hotel's business owners seek municipal assistance while they continue to build makeshift levees to protect their small beach areas which causes further erosion to the rest of the coast.

(BOTTOM) From left to right, Oscar Montes, Environmental Director for the Municipality of La Ceiba; Jimma Malone, Water Management and Sanitation Director for La Ceiba; Catalina Gutierrez-Paez, CityLinks Assistant Program Manager; and Oliver Sellers-Garcia, Director of Sustainability and the Environment for City of Somerville. This picture was taken during exchange trip 2 in March 2016. La Ceiba's technical staff visited the City of Somerville and toured the biggest Green Tech Lab in the country. A place for many startups and clean energy innovators.

BACK

(TOP) In Somerville, during the second exchange trip in March 2016. Technical staff from La Ceiba and Somerville discuss approaches and advances implemented in Somerville that have the potential to work in La Ceiba.

(BOTTOM) Oliver Sellers-Garcia, Director of Sustainability and the Environment, and Catalina Gutierrez-Paez, CityLinks Assistant Program Manager, visited a mangrove restoration project organized by Fundacion San Juan de Dios. On the picture two of the coordinators of the project and a community volunteer showed us the mangrove plantations located east of La Ceiba's coast for the purpose of controlling shore erosion and protecting the nearby community against natural disasters caused by climate change.

CityLinks ICMA Leaders at the Core of Better Communities USAID FROM THE AMERICAN PEOPLE

SEMARANG, INDONESIA + GOLD COAST, AUSTRALIA

COASTAL COMMUNITIES like Semarang are particularly susceptible to the impacts of climate change. Intense storms, beach erosion, and flooding are of particular concern to the city of Semarang. Located on the northern coast of Java, Indonesia, Semarang has a population of 1.6 million. The majority of the city's coastline is owned by private entities, which poses a challenge for the municipality in terms protecting and regulating the coast.

The City of Semarang has undertaken several remediation measures to address coastal erosion, which have achieved limited success. In the western section of the city, where fish ponds are located, the primary defense has consisted of planting of mangroves and building permeable sea walls made of sticks. However, the efforts at ecosystem restoration are often thwarted due to coastal flooding from rainfall that overwhelms the city's sewage system. As a result, water flowing into the mangrove area is polluted, slowing the maturation process of the trees. Moreover, resulting large tidal variations tend to wash out the young trees before they can mature.

PARTNERING ON SHARED CLIMATE CHALLENGES

In an effort to help the city with science based decision support related to this challenge, the CityLinks team paired Semarang with Gold Coast, Australia. Gold Coasts' extensive knowledge of coastal erosion and coastal modeling will assist the city of Semarang with modeling efforts to ensure that resources are going toward coastal restoration techniques that will have the intended impact.

RESULTS

1

A Memorandum of Understanding was developed and signed between Semarang's planning agency (BAPEDA) and Diponegoro University, enabling the City of Semarang to use, develop and run predictive coastal models and to investigate inundation problems in the City of Semarang systematically and scientifically.

2

Over $80,000 USD worth of coastal modeling software was provided free of charge from the Danish Hydraulic Institute for use by post graduate students at Diponegaro University for the benefit of the city of Semarang.

3

Development of a regional large scale hydrodynamic model of the Java Sea was created and handed over to the City of Semarang.

4

A group of ten postgraduate students and staff from BAPEDA were trained to run coastal models and develop more refined models for the City of Semarang.

SEMARANG, INDONESIA + GOLD COAST, AUSTRALIA

DIAGNOSTIC ASSESSMENT: IDENTIFYING CHALLENGES

- Substantial engineering intervention along the Semarang's coastline may have potentially caused local erosion and loss of sand that will be exacerbated by sea level rise.
- Mangrove plantation has been used as a major mitigation measure for a number of years, however, the problem of coastal erosion has not been measurably alleviated.
- There is a need for science based decision support tools to address coastal erosion and sea level rise going forward.

TECHNICAL EXCHANGE: SHARING BEST PRACTICES

- Demonstration of hydrodynamic models in Gold Coast, how they accounted for climate change impacts, and how they were utilized to inform coastal planning decisions.
- Engineered and natural mitigation efforts implemented to combat coastal erosion.
- The utilization of green space specifically engineered as a nature park that doubled as a way to combat and treat storm water runoff.

WORK PLANNING:

CREATE ACTIONABLE PROGRESS TOWARD UNDERSTANDING THE SOURCE OF THE SEMARANG'S COASTAL INUNDATION PROBLEM AND DEVELOP TOOLS THAT SUPPORT FINDING A SOLUTION.

OBJECTIVE

To develop a greater understanding of the physical forces at work along the Semarang coast, resulting problems, and potential solutions through a systematic and scientific approach

ACTIVITY 1: PROBLEM IDENTIFICATION & ASSESSMENT

Conduct site visits to learn more about the challenges being faced, identify the potential sources of problem, discuss current coastal management practices in Semarang, and source data for better assessment of situation and supporting future modelling exercise.

ACTIVITY 2: TOOL DEVELOPMENT FOR DATA-DRIVEN DECISION-MAKING

Introduce techniques, training, a base model and tools being used to address coastal management challenges by the City of Gold Coast.

ACTIVITY 3: TRAINING IN COASTAL MODELING SOFTWARE & DATA ANALYSIS

Establish a working partnership with local university, Diponegoro University, and train a team of postgraduate students and planning staff to create predictive coastal models to understand the physical forces at work along the Semarang coast.

CROSS-CUTTING RECOMMENDATIONS AND LESSONS LEARNED

1. Forging partnerships between city governments and universities benefit both parties by allowing academics to understand the practical needs of local government managers, while giving local government managers access to the scientific data they need to make informed decisions.
2. Coastal modeling can provide an evidence base for planners looking to ensure that city growth and development is done with climate change in mind.
3. Working with cities facing similar challenges allows practitioners to brainstorm solutions and generate "out of the box" ideas.

SEMARANG, INDONESIA + GOLD COAST, AUSTRALIA

FRONT

(TOP) The team exploring Tugu, where they went to learn about the success/failure of Semarang's mangrove project and its fish ponds.

(BOTTOM) A site visit to Tambak Lorok, a low income housing area in the east where the land is sinking significantly and residents are dealing with daily flooding.

BACK

(TOP) CRepresentatives from Gold Coast, Semarang, and the CityLinks team on a site visit during the first exchange trip.

(BOTTOM) Professor Dr. IR Purwanto, Dean of the School of Postgraduate Studies at Diponegoro University and IR Bambane Hailyono, Head of Regional Planning Board for Semarang Municipality sign a memorandum of understanding to begin the development of a coastal model for Semarang, Indonesia during the final exchange trip.

CityLinks ICMA Leaders at the Core of Better Communities USAID FROM THE AMERICAN PEOPLE

PORTMORE, JAMAICA + TOWNSVILLE, AUSTRALIA

LOCATED IN THE ATLANTIC HURRICANE BELT, Portmore, Jamaica is extremely susceptible to hurricanes that can cause severe flooding and widespread infrastructure damage. Portmore is a low-lying area on the southern coast of Jamaica. Originally a predominantly agricultural area, the city transformed into a large residential community in the 1950s and became home for thousands of residents who worked in Kingston. Since then, the population of Portmore has grown extremely rapidly, leading it to become the largest residential area in the Caribbean.

One of the greatest climate related risks to Portmore is the potential impacts from tropical storms, storm surges and sea level rise. The coastal location of the city also renders it highly susceptible to incremental changes in sea levels and the potential for inundation that will only worsen with future seal level rise.

Recognizing that the city's flood risk is increasing with the threat of climate change, Portmore applied to be part of the CityLinks partnership in the hopes of receiving technical assistance to better plan for future climate impacts.

PARTNERING ON SHARED CLIMATE CHALLENGES

Although, the distance between Townsville and Portmore couldn't be greater, local government structure and shared climate challenges are incredibly similar. In conjunction with the Urban Climate Change Research Network the partnership took localized climate data and community input to create the basis for Portmore's Climate Action Plan.

RESULTS

1

Based off of a collective social learning workshop model from Townsville, the partnership hosted a workshop for 46 key stakeholders from local government, civil society, and the national government in Portmore to prioritize climate actions that will feed into Portmore's Climate Action Plan.

2

Portmore adopted climate education initiatives from Townsville that will work with students from elementary to high school on the creation of sensors to monitor indoor energy consumption and indoor temperatures.

3

After seeing the impacts white roofs had in Townsville, Portmore is considering the design of municipal pilot projects that would encourage white roofs.

PORTMORE, JAMAICA + TOWNSVILLE, AUSTRALIA

DIAGNOSTIC ASSESSMENT: IDENTIFYING CHALLENGES

- The data required for informed decision making related to climate change exists in siloes, making it difficult to obtain from various academic and government agencies.
- To better plan for climate change the city's storm surge and inundation maps need to take into account projected sea level rise.
- Portmore's high level of community engagement could be a driver of future climate action.

TECHNICAL EXCHANGE: SHARING BEST PRACTICES

- Delegates from Portmore were exposed to Townsville's model for community engagement and collective action.
- Demonstrations on Townsville's efforts to increase solar usage and decrease energy consumption with white roofs.
- Townsville's efforts at ecosystem restoration to provide protection against storms.
- Leveraging partnerships across public, private, and academic institutions to ensure climate risks are addressed across sectors.

WORK PLANNING: CREATING OPPORTUNITIES FOR COMMUNITY ENGAGEMENT IN CLIMATE ACTION PLANNING AND IDENTIFYING ACTIVITIES TO MITIGATE AND ADAPT TO THE CLIMATE RELATED RISKS IN PORTMORE.

OBJECTIVE

Utilize climate data and gather community input to inform a Climate Action Plan for Portmore Municipal Council.

ACTIVITY 1

Provide an overview of community based climate actions to municipal officials from Portmore through an exchange visit to Townsville.

ACTIVITY 2

Host a collective social learning workshop in Portmore to develop potential activities that respond to the localized climate projections for Portmore.

ACTIVITY 3

Create the framework and provide the data for Portmore's Climate Action Plan.

CROSS-CUTTING RECOMMENDATIONS AND LESSONS LEARNED

1. Open data policies are critical to ensuring that climate data is used across departments and mainstreamed into municipal decision making.
2. Engaging the community at every level of climate action planning creates buy-in, spreads responsibility beyond the municipality, and ensures more sustained action.
3. A climate action plan should not be seen as a stagnant document, but rather an iterative process that can continue to grow and evolve.

PORTMORE, JAMAICA + TOWNSVILLE, AUSTRALIA

FRONT

(TOP) Staff from Portmore, Jamaica, with staff from Townsville, Australia overlooking the Townsville coastline.

(BOTTOM) A representative from a fishing cooperative at Hellshire Beach explaining the impacts of climate change they are seeing on the coastline in Jamaica.

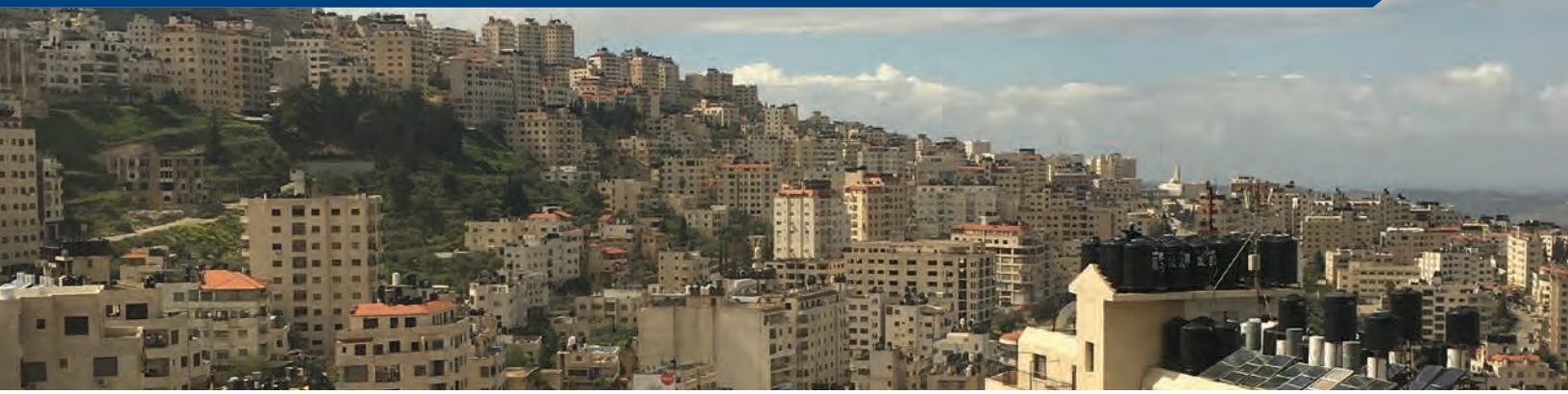
BACK

(TOP) Deputy Mayor Alric Campbell of Portmore, Jamaica speaking with Greg Bruce in Townsville Australia on how Townsville sees the promotion of solar energy as an adaption effort.

(BOTTOM) Phillipa Rickets-Edmund from Portmore Jamaica explaining the vision of the Townsville, Portmore partnership at a collective social learning workshop in Townsville Australia.

CityLinks ICMA Leaders at the Core of Better Communities USAID FROM THE AMERICAN PEOPLE

APP2ACTION CHALLENGE / NABLUS



INTRODUCTION

A SMART APP CHALLENGE, is a virtual competition of brainstorming and computer programming that spans several months. It draws together the talent and creativity of software developers, designers, and subject-matter experts all working towards the creation of a winning application. The winning application is then refined and piloted during an incubation period, allowing for a more fully-formed and sustainable tool.

In many cases, the main goal of a smart app challenge is to create a usable product such as a mobile application or website. However, the success of a smart app challenge does not solely rely on the product, but can include improved multilateral governance models, citizen engagement, and government transparency.

While smart app challenges are already considered a useful concept in the international realm, most have occurred at a global scale, implemented by donors or external NGOs. Because CityLinks focuses on municipal governance and capacity building, the CityLinks App2Action Challenge is a tailored, localized, and implementable model for direct use by municipal governments and USAID Missions.

PILOT PROJECT OVERVIEW

Over the course of several months, the App2Action Challenge pilot brought together software developers, designers, and subject-matter experts to develop phone or web-based tools that helped address one of three water sector challenges in Nablus Municipality. Nablus is a Palestinian cultural and commercial center about 50 km north of Jerusalem in the West Bank with a population of over 125,000. It is one of the oldest cities in the world yet hosts a thriving IT sector with over 160 software development companies. The App2Action Challenge takes the form of a contest, with teams and individuals competing to develop the best app to win cash prizes and the chance to secure additional funding for an incubation phase.

The App2Action Challenge is a unique model that tailors the mechanism of an international smart app challenge to the local level by:

- Working directly with the local government and USAID Mission to identify a specific challenge that is relevant to the community
- Creatively using publicly available resources and tool to develop a practical, replicable model for future use
- Focusing efforts on the incubation period to ensure sustainability and local ownership of results

OBJECTIVES

1. Enhance municipal decision-making and quality of services by increasing the use of technology and data.
2. Address WASH challenges in municipalities by developing innovative software solutions that utilize data for municipal government use and provide tools replicable through USAID programs.
3. Build connections between community members, civic organizations, the private sector, and local government to foster transparency, civic engagement, and multilateral collaborations.
4. Create a replicable model as a tool for Missions and local governments in developing collaborative locally tailored technical solutions.

APP2ACTION CHALLENGE / NABLUS

APP2ACTION CHALLENGE PROCESS

The App2Action Challenge is comprised of multiple phases that take place over a nine to twelve month period. The phases are as follows:

DIAGNOSTIC + KICK-OFF

A 3–5 day visit with the municipality to meet with department heads, officials, and other local partners to define and hone challenge statements, formally determine rules, regulations, and expectations.

TECH JAM

A one day workshop between local water and sanitation sector experts and local government officials from Nablus Municipality, partner organizations, and participants. It is a chance for Challenge participants better understand the problem statements and the technical areas. It is integral to the development of relationships between the civic community and municipal officials.

CONTEST PERIOD

A three month period when participants remotely develop an application based on information learned from the Tech Jam and sample data provided by the municipality.

SHOWCASE

A one day award ceremony where all participants were invited to demonstrate their app to a panel of judges to compete for cash prizes as well as network with private and public sector stakeholders.

INCUBATION

A three month testing and implementation period where the winning team will further develop, test, and integrate their app into the municipality's infrastructure.

RESULTS

A total of five teams submitted apps for consideration. Each app was developed with open source software and is available for free.

The municipality selected an app that will allow customers to upload maintenance requests to municipality servers. The reports will include location, photo, description, and phone number. In the interest of transparency, all users will be able to see reports and interact with them using a like feature to let the municipality know how many people the issue is affecting.

The first prize winners moved forward with a plan for the Incubation phase which was approved by stakeholders from the municipality. The municipality will utilize the app to respond and update the status of each report for customers to see its progress. Results from the incubation phase were not available at the time of the writing of this fact sheet.

Two of the winners, Radi Barq and Mohamad Sayeh, students from An Najah University in Nablus, attended the 2016 Esri Users Conference where they gained a broader understanding of how different open data and mapping tools can be utilized to create stronger, healthier, and smarter communities.

APP2ACTION CHALLENGE

FRONT

(TOP) Ahmad Abu-Omar and teammate May Awayes taking notes at the Tech Jam.

(BOTTOM) Participants, mentors, judges, and project organizers at the conclusion of the Showcase.

BACK

(TOP) Ahmed Amer and Radi Barq presenting their application to the judges panel at the Showcase.

(BOTTOM) Grand prize winner Radi Barq and Best Use of Esri prize winner Mohammad Sayeh at the Esri User Conference in San Diego, California.

ICMA: LEADERS AT THE CORE OF BETTER COMMUNITIES

ICMA (the International City/County Management Association) is the premier local government leadership and management organization. Its mission is to create excellence in local governance by developing and advancing the professional management of local government. ICMA has been doing this for over 100 years by providing technical and management assistance, training, and information resources to its members and the local government community. In 1989, with tis first USAID grant, ICMA began working worldwide. Since then it has successfully designed, implemented, and evaluated hundreds for international projects, establishing a solid reputation for its practical, hands-on approach to meeting global challenges.

ACKNOWLEDGEMENTS

CityLinks in review looks back at five years of fostering partnerships that spanned the globe. The program would not have been possible without the funding and support of the United States Agency for International Development (USAID). In addition ICMA would like to recognize the many dedicated and hardworking public servants that contributed to the success of the program. Through their tireless efforts to create more resilient communities, ICMA is confident that the program's impact and legacy will live on through the relationships fostered in these partnerships.

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