



I would like to thank the participants in the *GreenPrint* planning process for their time, dedication and professionalism. The core planning team worked tirelessly to ensure that *GreenPrint* captures the key sustainability priorities of our government, community and economic partners, as well as concerned residents. During the process, I was struck by the passion and thoughtfulness of all participants to preserve and improve Miami-Dade County for generations to come. It is their unique and collective commitment to *GreenPrint’s* development and implementation that will lead all of us to accomplish our comprehensive and inclusive sustainability goals.

*Susanne M. Torriente, Sustainability Director*

Mayor’s Sustainability Advisory Board

- Honorable Katy Sorenson**, Former County Commissioner, Advisory Board Chairperson  
**Honorable Shirley Gibson**, Mayor, City of Miami Gardens  
**Colleen Ahern-Hettich**, Director, Earth Institute, Miami Dade College  
**Veronica Benzinger**, Senior Vice President, Aon Environmental Services Group  
**Truly Burton**, Director of Government Affairs, Builders Association of South Florida  
**Ray Castellanos**, Owner, Authentic Construction  
**Tracey E. Gallentine**, Senior Account Executive, Ameresco  
**Barry Johnson**, President and CEO, Greater Miami Chamber of Commerce  
**Jim Murley**, Assistant Dean, External Affairs, College of Design and Social Inquiry, Florida Atlantic University  
**Bill Riley**, Business Manager, International Brotherhood of Electrical Workers Local 349  
**Traci Romine**, Director of Climate Change Policy and Communications, Audubon of Florida  
**Dr. Mark B. Rosenberg**, President, Florida International University  
**Paul C. Savage**, Law Offices of Paul C. Savage, P.A.  
**John Scott**, Director of Client Solutions, Cushman and Wakefield  
**Dr. Jose Szapocznik**, Chair, Department of Epidemiology and Public Health, University of Miami  
**William D. Talbert, III**, President and CEO, Greater Miami Convention and Visitors Bureau

GreenPrint Core Planning Team

- Susanne M. Torriente**, Sustainability Director (Plan Leader)  
**Amy Knowles**, Organizational Development Administrator, Department of Environmental Resources Management (Plan Coordinator)  
**Maribel Balbin**, Sustainability Program Manager, Office of Sustainability  
**Derek Bradchulis**, Engineer, Department of Environmental Resources Management  
**Albert Charles**, Former Sustainability Program Assistant, Office of Sustainability  
**Maggie Fernandez**, Sustainability Program Manager, Office of Sustainability  
**Hector Florin**, Web Publisher, Government Information Center  
**Patricia Gomez**, Sustainability Program Manager, Office of Sustainability  
**Debbie Griner**, Environmental Resources Project Supervisor, Department of Environmental Resources Management  
**Nichole Hefty**, Climate Change Program Coordinator, Department of Environmental Resources Management  
**Amy Horton-Tavera**, Business Analyst Manager, Office of Strategic Business Management  
**Lisa Klopp**, Sustainability Program Assistant, Office of Sustainability  
**Gianni Lodi**, Principal Planner, Department of Planning and Zoning  
**Devesh Nirmul**, former Sustainability Program Manager, Office of Sustainability  
**Angela Sager**, Energy Management Specialist, Office of Sustainability  
**Susannah Troner**, Environmental Resources Prokect Supervisor, Department of Environmental Resources Management

GreenPrint Interdepartmental Team

All County departments played a vital role in developing this plan and will be essential for implementation.

ICLEI Local Governments for Sustainability

**Cyrus Bhedwar**, Southeast Regional Director

Climate Change Advisory Task Force

**Honorable Harvey Ruvin**, Chair and Members

In addition to the institutions referenced above, additional research and implementation partners include:

- Americans with Disabilities Act (ADA) Office  
Audubon Society  
Beacon Council  
Builders Association of South Florida (BASF)  
Building Owners and Management Association (BOMA)  
Chicago Climate Exchange (CCX)  
Citizens Independent Transportation Trust (CITT)  
Civic Organizations  
Clean Cities Coalition  
Climate Leadership Initiative, Steve Adams  
Community bicycling enthusiasts  
Community Image Advisory Board (CIAB)  
Dade Community Foundation Miami Fellows Initiative  
Dade County Farm Bureau  
Dream in Green  
Environmental Education Providers  
Earth Learning  
Environmental Protection Agency (EPA)  
Fairchild Tropical Gardens  
Federal Transportation Authority (FTA)  
Financial Institutions  
Florida Department of Environmental Protection (FDEP)  
Florida Department of Transportation (FDOT)  
Florida Fish and Wildlife Conservation Commission (FWC)  
Florida Highway Administration (FHWA)  
Florida Power and Light (FPL)  
Greater Miami Chamber of Commerce  
Greater Miami Convention and Visitors Bureau  
Human Services Coalition
- Leadership Miami  
Marine and Estuarine Goal Setting for South Florida (MARES):  
University of Miami  
Metropolitan Planning Organization (MPO)  
Miami Dade Expressway Authority (MDX)  
Miami-Dade County Agriculture Manager  
Miami-Dade County Development Coordinator  
Miami-Dade County Public Schools  
Miami-Dade County Senior Advocate  
Miami-Dade Department of Health (State)  
Municipalities  
National Oceanic & Atmospheric Administration (NOAA),  
Sandy Eslinger  
National Park Service (NPS)  
Socio-economic Development Council (SEDC)  
South Florida Commuter Services (SFCS)  
South Florida Regional Transportation Authority (SFRTA)  
South Florida Water Management District (SFWMD)  
South Florida Workforce  
Southeast Diesel Collaborative (US SEDC)  
Southeast Florida Regional Climate Change Compact:  
Broward, Monroe, Miami-Dade, and Palm Beach counties  
Southeast Florida Regional Partnership  
UM Initiative on Excellence in Public Service  
United States Geological Survey (USGS)  
University of Florida Institute of Food and Agricultural Sciences  
(IFAS) Cooperative Extension  
US Army Corps of Engineers (USACE)  
And you!

GreenPrint Interns

- Natalia Martinez**, Columbia University  
**Diana Mitsova-Boneva, PhD**, Florida Atlantic University, College of Architecture Urban and Public Affairs  
School of Urban and Regional Planning, Sustainable Development Course  
**Miami-Dade Water and Sewer Department Contract Team**, Florida International University, Civil and Environmental Engineering Department

GreenPrint Graphic Design Team

- Frank Guemes**, Creative Design Division Manager, Government Information Center  
**Karla Echeverria**, Graphic Designer, Government Information Center

GreenPrint Copy Editor

**Matt Pinzur**, Special Assistant to the County Manager

Written July 2010-October 2010; Released December 2010





"In Miami-Dade, global warming and climate change, these are local issues to us – as local as public safety, affordable housing and public transit. We are among the world's most forward-thinking on matters related to our environment, land-use planning, natural resources, and energy consumption."

*Mayor Carlos Alvarez, Mayors' Green Initiatives for Economic Growth Workshop and Trade Fair, August 28, 2010*

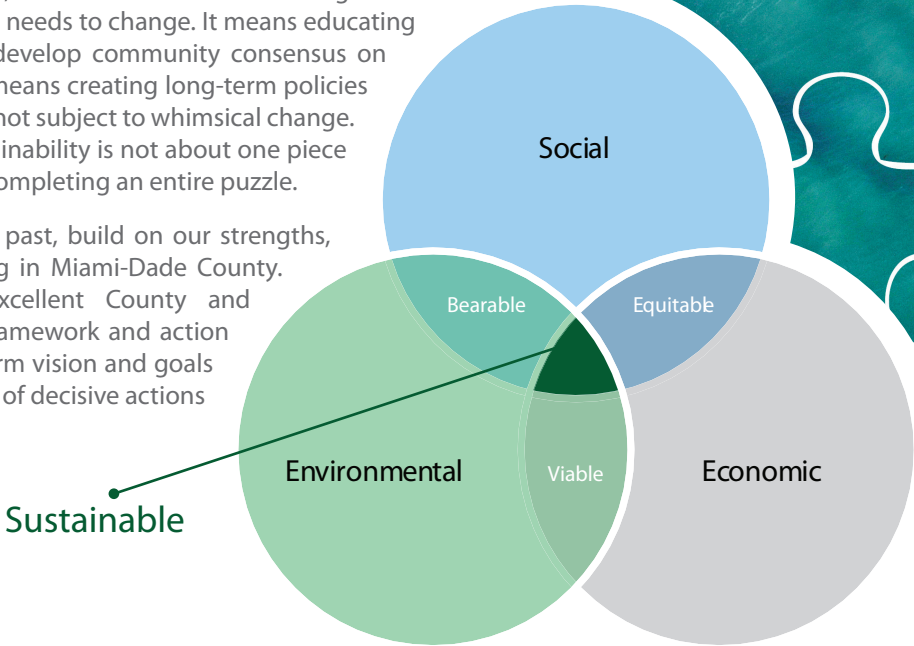
What does sustainability mean to Miami-Dade County?

Miami-Dade County is a beautiful and resilient community; but it's no secret that the past few years have been challenging. Unemployment has grown. Government, school, and private-sector budgets have shrunk. The real estate and construction industries have suffered. Life has been a struggle for many of our residents. **What is sustainability, and why do we need to plan for it now?** We need it now more than ever. If you care about the people here, if you care about your finances, if you care about our beautiful surroundings, then you care about sustainability. *GreenPrint* is your plan, and it is our plan. Join us in designing our sustainable future.

Sustainability, or being "green," is a relatively new term. In *GreenPrint*, sustainability is offered in a comprehensive, balanced, and progressive spirit. A sustainable community has a **vibrant economy** and clean, pedestrian-friendly, and tree-lined **healthy communities**. It provides for **responsible land use and smart transportation**, with easy movement via a variety of transportation options for the benefit of current and future residents and visitors. Sustainability ensures that **our environment** is clean and carefully managed for adequate water supplies, ecosystem health, and sustainable solid waste management. These sustainability elements directly help us reduce our vulnerability to **climate change**. Our geography and population are expansive and diverse. **Strong leadership, connections, and commitment** are essential to focus our actions as one community.

The most important principle of sustainability is that it starts with community commitment. That means developing a common language and involving residents, developers, businesses, environmentalists—all stakeholders, in other words—in a dialogue about why change must happen and what needs to change. It means educating stakeholders and asking them to develop community consensus on what needs to change and how. It means creating long-term policies that are consistent and reliable and not subject to whimsical change. And it means recognizing that sustainability is not about one piece of community building, but about completing an entire puzzle.

It is critical that we learn from our past, build on our strengths, and wisely define sustainable living in Miami-Dade County. *GreenPrint*, along with other excellent County and municipal plans, will provide the framework and action plan to do this, focusing on long-term vision and goals and a manageable five-year horizon of decisive actions to move toward those goals.



Our history of progress and resilience

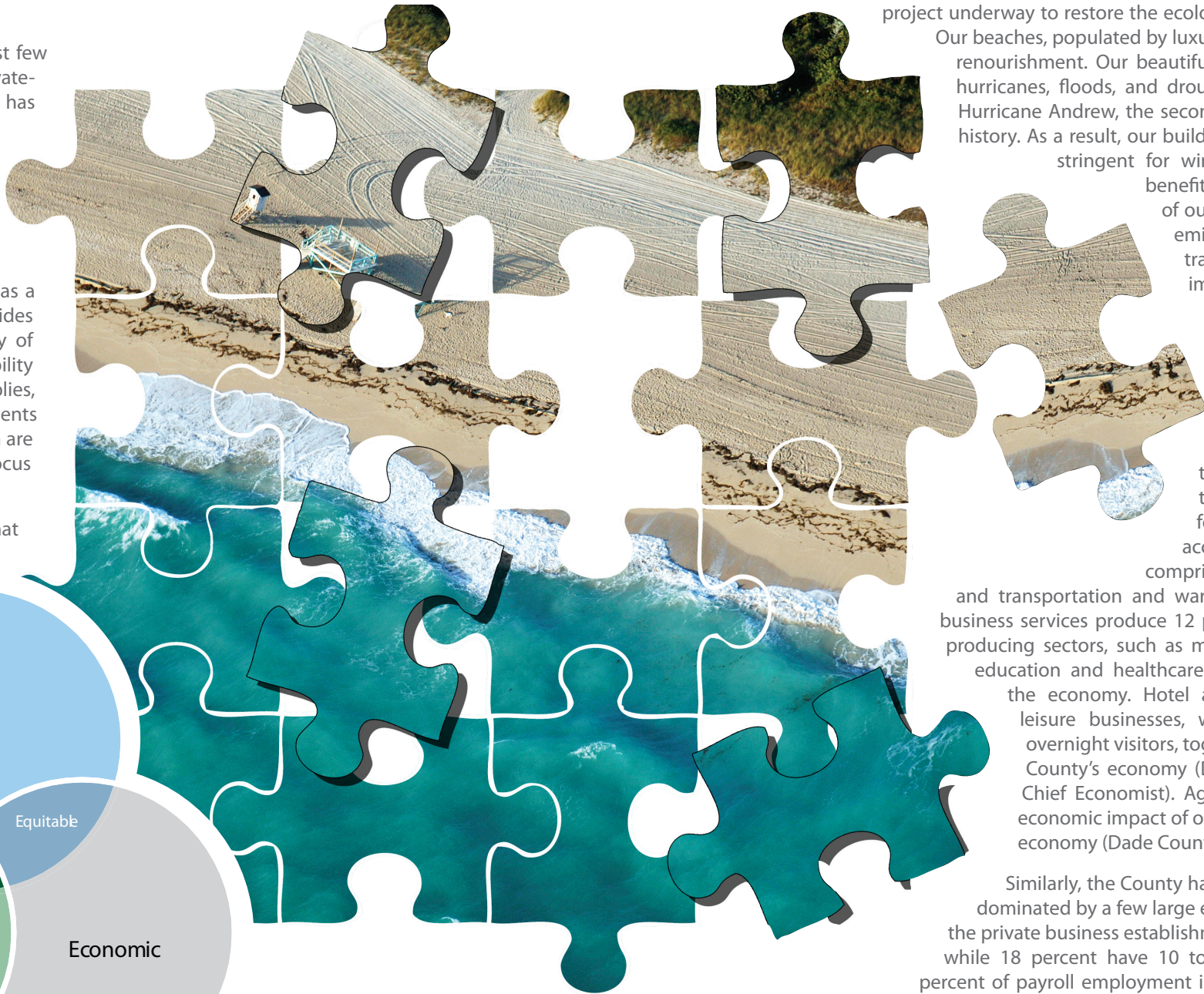
A century ago the first Miamians built railroads, drained the Everglades, and established a tropical tourism destination. What we are now is a metropolis of 2.5 million people, and growth is projected at 30,000 per year. We have benefited from our unique global position and extraordinary environment. Known as the "Gateway to the Americas", Miami-Dade County hosts one of the busiest international seaports and airports in the United States.

We are home to two renowned national parks, Everglades and Biscayne Bay, as well as miles of beaches and hundreds of thousands of acres of wetlands and environmentally sensitive lands. We minimize damage from development to our environment through regulatory, restoration and acquisition programs. Our hydrology is unique. A man-made drainage system is critical for stormwater management and is linked to a porous aquifer that supplies excellent quality drinking water. The Comprehensive Everglades Restoration Plan is a major federal project underway to restore the ecological function of the "River of Grass."

Our beaches, populated by luxury hotels and homes, require vigilant renourishment. Our beautiful weather is also intense with heat, hurricanes, floods, and droughts. We survived and rebuilt after Hurricane Andrew, the second most destructive hurricane in U.S. history. As a result, our building codes are now the nation's most stringent for wind-resistant construction. While we benefit from excellent air quality courtesy of our location and wind patterns, carbon emissions from our homes and vehicles travel to neighboring counties and impact those with sensitive health.

Miami-Dade County has a fairly well diversified economy. The economy is not overly dependent upon a few industries. Its largest industry groups are finance, insurance and real estate which together account for 26 percent of the Gross Domestic Product (GDP), followed by commerce, which accounts for 20 percent of GDP and is comprised of wholesale trade, retail trade, and transportation and warehousing services. Professional and business services produce 12 percent of the County's GDP. Goods-producing sectors, such as manufacturing and construction, and education and healthcare each account for eight percent of the economy. Hotel accommodations, food service and leisure businesses, which are significantly affected by overnight visitors, together represent seven percent of the County's economy (Dr. Robert Cruz, Miami-Dade County Chief Economist). Agriculture is important, providing an economic impact of over \$2.57 billion to the local and state economy (Dade County Farm Bureau).

Similarly, the County has a diverse employer base that is not dominated by a few large employers. Eighty-one (81) percent of the private business establishments have fewer than 10 employees, while 18 percent have 10 to 249 employees. Approximately 84 percent of payroll employment in the County is found in the private sector, while state, local and federal agencies employ approximately 16 percent of the workforce.







"Sustainability means staying in business forever, whatever your business is. If you run a ski resort, that means you have to address climate change while also cultivating your business in many ways. If you're in the business of parenting, to keep that practice viable forever means ensuring clean water, a healthy environment for your children to grow up in, financial security, stable climate and lots more."

*Auden Schendler, Getting Green Done*



## Why should we be concerned about climate change?

Miami-Dade County is progressive and resilient, but is also one of America's communities most vulnerable to climate change. We are a coastal community at sea level, located at the tip of the Florida peninsula with many low-lying areas. We have a large, dense population. Key economic drivers, tourism and agriculture, are weather dependent. Our population growth could be exacerbated at any time by a segment of mass migration. According to a recent study by the National Academy of Sciences, "As many as 7 million Mexicans could migrate to the U.S. by 2080 as climate change reduces agricultural production in Mexico" (Gorman). Could Miami-Dade County be host to climate refugees given our international positioning and immigration history?

Now is the time to focus as a community on how to turn science into action. The **Climate Change Action Plan** contained within **GreenPrint** charts the steps necessary to do this.

## A "new normal"

The recent downturn in the economy has the hidden benefit of creating a positive impact in individual household sustainability. Residents and businesses are focused on cutting costs. We are producing less solid waste, lower fuel emissions, and less water use. A tougher economy has also forced behavioral changes: less spending, more saving and a shift from consumerism to a more frugal or minimalist lifestyle. The challenge and opportunity is to take advantage of an otherwise negative situation and allow it to become the new normal. How do we as a society and as a government avoid the temptation to grow, build and pollute again when our fortunes improve? How do we manage growth, consume only what we need, recycle more and conserve water and energy?

These are the questions **GreenPrint** seeks to address and our community is called to answer.



Strong Leadership,  
Connections &  
Commitment

### • Create the next generation of green leaders

Work with the more than 100 GreenPrint partners to integrate sustainability into local, regional and national strategic decision-making, policies and operations.



Water & Energy  
Efficiency

### • Use less water and energy

Reduce per capita non-renewable energy use to 20 percent below 2007 baseline by 2015. Reduce water consumption by 1.5 million gallons a day. Reduce government electricity use by 20 percent from 2007 to 2014 in accordance with Board of County Commissioners legislation.



Our  
Environment

### • Maintain exceptional quality of air, drinking water, and coastal waters used for recreation

Continue to achieve the best air quality rating at least 90 percent of the year and exceed drinking water quality standards. Prevent degradation of our outstanding Florida waters.

### • Protect and enhance Biscayne Bay, the Everglades, and vital ecosystems

Restore and enhance more than 500 acres of coastal habitats and wetlands, and preserve more than 24,000 acres of environmentally endangered lands.

### • Reinvent our solid waste system

Reduce or divert 75 percent of our solid waste from landfills by 2020 through reusing, recycling, and generating electricity.



Responsible Land  
Use & Smart  
Transportation

### • Use our land wisely, creating and connecting strong sustainable neighborhoods

Develop 15 urban center area plans and six multi-modal corridor master plans. Create four transit-oriented developments (TODs) on heavy rail and bus corridors. Develop level of service metrics to identify resident accessibility to parks and open space areas. Improve access through an interconnected network of shaded and safe bikeways and trails connected to neighborhoods, schools, employment centers, civic buildings, and other community destinations

### • Provide more transportation options, reducing the time we spend in our cars

Add 10 million boardings to our public transportation system through increased services, and enhancing convenience, comfort, and timely service. Increase the percentage of total trips taken by walking or bicycling from 10 percent to 16 percent of all travel trips. Increase resident satisfaction with the availability of sidewalks for pedestrians to 65 percent or more and add 40 miles of bicycle trails and lanes.



Vibrant  
Economy

### • Create green jobs

Cultivate an innovative and sustainable economic infrastructure that creates 20,000 green jobs by 2020 while building on our economic strengths and adding to our competitiveness in the global economy.

### • Build on our international reputation to become a green enterprise destination

Increase the percentage of green hotels, eco-tourism, and hospitality related businesses.



Healthy  
Communities

### • Raise awareness that sustainable living is healthy

Decrease our community's lifestyle disease rates such as diabetes and heart disease through healthy eating and exercise. Provide access to fresh, local and/or organic food in all neighborhoods through grocery stores, farmers markets and community gardens supported by local agriculture. Increase the number of short walking and biking trips through safety and other programs. Reduce barriers for disabled and elderly residents.

### • Plant more Florida-friendly and native trees and landscapes

Plant half a million trees by 2015 to achieve a 30 percent tree canopy by 2020 and encourage native, drought-tolerant landscaping to cool our communities, capture greenhouse gas emissions, beautify our neighborhoods, and provide wildlife habitat.



Climate Change  
Action Plan

### • Understand and respond to current and future climate change impacts

Integrate local climate change indicators with existing emergency management, storm water planning, and infrastructure planning.

### • Reduce greenhouse gas emissions

Reduce GHG emissions by 10 percent by 2015, working towards 80 percent reduction by 2050 to advance the Cool Counties Program commitment.