



**FLORIDA
INTERNATIONAL
UNIVERSITY**

Office of University Sustainability

STARS 2.0

May-16

red= completed by PIs who do not have faculty status

Sustainability Related Research

Fiscal Year 2015

July

Title	PI	Department
Impacts of sedimentation on herbivory and the control of algal communities and coral health on Florida coral reefs	Deron Burkepile	Biology
Florida Bay Mudbank Vulnerability Assessment	James Fourqurean	Biology
Urban Water Innovation Network (U-WIN): Transitioning Toward Sustainable Water Systems	Michael C Sukop	Earth and the Environment

June

Title	PI	Department
Analysis of acoustic data from Deep Water Horizon	Kevin Boswell	Biology
DEEPEND: Deep-Pelagic Nekton Dynamics of the Gulf of Mexico	Kevin Boswell	Biology
Examining the effects of offshore marine mining activities on Norton Sound red king crab habitat - Phase 2	Kevin Boswell	Biology
Ecology of Forage Fishes in the Arctic Nearshore	Kevin Boswell	Biology
THE GLOBAL FIN-PRINT: a worldwide underwater video survey of shark and ray density, diversity and ecological impact	Demian Chapman	Biology
CAREER: Measuring the thermal tolerances of individuals, populations, and species and predicting plant species responses to climate change in the tropical Andes	Kenneth J Feeley	Biology
Phylogeography and Conservation Genetics of The Caribbean Zamia Clade: An Integrated Systematic Approach with SSRs and Single Copy Nuclear Genes	F Javier Francisco Ortega	Biology

The Fairchild Challenge for Middle and High Schools at Fairchild Tropical Botanic Garden	F Javier Francisco Ortega	Biology
Acquisition, Curation, Mapping and Submission of Accession Information to U.S Department of Agriculture Agriculture Research Service (USDA-ARS) Germplasm Resources Information Network (GRIN)	Daniel Gann	Library Operations
Deepwater biodegradation of crude oil under simulated laboratory conditions in support of the BP-Brazil Offshore Exploration: Logistical support and experimental design scope of work.	Piero R Gardinali	Chemistry
Sheetflow Effects and Canal Backfilling on Sediment Source and Transport in the DECOMP Physical Model: Analysis of Molecular Organic Biomarkers	Rudolf Jaffe	Chemistry
Doctoral Education in Interdisciplinary Agriculture and Natural Resources Sciences	Krishnaswamy Jayachandran	Earth and the Environment
Quantifying Asymmetries of Precipitation and Convection in Tropical Cyclones and Their Relationship to Storm Intensity Changes Based on 14 Years of TRMM Data	Haiyan Jiang	Earth and the Environment
Arctic Observing Networks: Collaborative Research: Sustaining and amplifying the ITEX AON through automation and increased interdisciplinarity of observations	Steven Oberbauer	Biology
Collaborative Proposal: Quantifying the footprint of a dominant organism: Biogeochemical impacts of leaf cutter ants in a lowland tropical forest ecosystem	Steven Oberbauer	Biology
Assessment of water and constituent transport in the L31N canal following two hydraulic alterations to flow within and to the Everglades National Park	Rene Price	Earth and the Environment
Landscape pattern - Marl Prairie/Slough Gradients	Jay Sah	Earth and the Environment

Monitoring of Tree Island Condition in the Southern Everglades	Jay Sah	Earth and the Environment
Human Impacts to Coastal Ecosystems in Puerto Rico (HICE-PR): A remote sensing, hydrologic, ecologic and socio-economic assessment with management implications	Shimelis Gebriye Setegn	Environmental and Occupational Health
Monitoring for Potential Water Quality Impacts along the Eastern Boundary of Everglades National Park, Including Taylor Slough	Tiffany Troxler	Southeast Environmental Research Center
The Fairchild Challenge for Middle and High Schools at Fairchild Tropical Botanic Garden	John Withey	Biology
CARTHE II - Consortium for Advanced Research on Transport of Hydrocarbon in the Environment	Ping Zhu	Earth and the Environment
May		
Title	PI	Department
Analysis of acoustic data from Deep Water Horizon	Kevin Boswell	Biology
Examining the status and distribution of reef fish spawning aggregations in the Southeast Florida Coral Reef Initiative (SEFCRI) Region	Kevin Boswell	Biology
Tanzania Integrated Water, Sanitation and Hygiene (iWASH)	Maria C Donoso	Earth and the Environment
Dry Tortugas National Park Seagrass Communities Assessment Project: Long-term seagrass monitoring	James Fourqurean	Biology
Florida International University's Research Support to the Department of Energy's Office of Environmental Management	Leonel E Lagos	ARC Applied Research Center
Role of Florida Bay coastal embayments as fish habitat: nursery value and use by valuable recreational species	Jennifer Rehage	Earth and the Environment
Effects of contaminants on coastal fisheries: a literature review & implications for bonefish in South Florida	Jennifer Rehage	Earth and the Environment

Provide office services and operational technical support to the South Florida Ecosystem Restoration Task Force, Office of the Executive Director	Leonard Scinto	Earth and the Environment
Investigating mechanism of algal blooms in Biscayne Bay (Pilot Study)	Anna H Wachnicka Kosiorek	Southeast Environmental Research Center
April		
Title	PI	Department
Aquarius Reef Base: NEEMO_XX_NASA	James Fourqurean	Biology
The Effects of Wet Season Hydrology Patterns on Prey Populations that Support Wading Bird Populations	Evelyn Gaiser	Environment, Arts, and Society
Participation in IODP Expedition 351	Rosemary Hickey	Earth and the Environment
Florida International University's Continued Research Support for the Department of Energy's Office of Environmental Management: Task 1	Leonel E Lagos	ARC Applied Research Center
Florida International University's Continued Research Support for the Department of Energy's Office of Environmental Management: Task 2	Leonel E Lagos	ARC Applied Research Center
Florida International University's Continued Research Support for the Department of Energy's Office of Environmental Management: Task 3	Leonel E Lagos	ARC Applied Research Center
Florida International University's Continued Research Support for the Department of Energy's Office of Environmental Management: Task 4	Leonel E Lagos	ARC Applied Research Center
Role of Marsh-Mangrove Interface Habitats as Aquatic Refuges for Wetland Fishes and other Aquatic Animals	Jennifer Rehage	Earth and the Environment
The Effects of Wet Season Hydrology Patterns on Prey Populations that Support Wading Bird Populations	Joel Trexler	Biology

Linking Satellite and Soil Data to Validate Coastal Wetland "Blue Carbon" Inventories: Upscaled Support for Developing MRV and REDD+ Protocols	Tiffany Troxler	Southeast Environmental Research Center
March		
Title	PI	Department
DISSERTATION RESEARCH: Evolution and domestication genetics of the mango	Eric Bishop-Von Wettberg	Biology
CAREER: Fish-derived nutrients in a coral reef ecosystem - impacts on benthic communities and importance for coral restoration	Deron Burkepile	Biology
Florida International University's Research Support to the Department of Energy's Office of Environmental Management: FIU'S Environmental Research	Leonel E Lagos	ARC Applied Research Center
Florida International University's Research Support to the Department of Energy's Office of Environmental Management: Sub Project 1	Leonel E Lagos	ARC Applied Research Center
Florida International University's Research Support to the Department of Energy's Office of Environmental Management: Sub Project 3	Leonel E Lagos	ARC Applied Research Center
Florida International University's Research Support to the Department of Energy's Office of Environmental Management: Subproject Waste and D&D Eng	Leonel E Lagos	ARC Applied Research Center
Development of Reduced Order Model for Reacting Gas-Solid Flow using Proper Orthogonal Decomposition	Dwayne McDaniel	Mechanical and Material Engineering
2015/2016 Water-Use Consumption Data Gathering	Berrin Tansel	Civil and Environmental Engineering
Effects of saltwater intrusion on Everglades peat soil	Tiffany Troxler	Southeast Environmental Research Center
February		

Title	PI	Department
Catchment-scale management for ecosystem, health, economic, and cultural benefits in the lower Mara River Basin: The Serengeti Lake Victoria (SELVA) Sustainable Water Initiative	Elizabeth P Anderson	Environment, Arts, and Society
Analysis of acoustic data from Deep Water Horizon	Kevin Mershon Boswell	Biology
LTER: FCE LTER III - Coastal Oligotrophic Ecosystems Research	Evelyn E Gaiser	Environment, Arts, and Society
Assessing Near-Field and Landscape Scale Ecological Effects of the Modified Water Deliveries and Comprehensive Everglades Restoration Plan Projects in Northeast Shark River Slough, Everglades National Park: Gaiser Subproject	Leonard Scinto	Earth and the Environment
Assessing Near-Field and Landscape Scale Ecological Effects of the Modified Water Deliveries and Comprehensive Everglades Restoration Plan Projects in Northeast Shark River Slough, Everglades National Park: Trexler Subproject	Joel C Trexler	Biology
January		
Title	PI	Department
CAREER: Robust Modeling and Predictions of Stream Water Quality and Ecosystem Health in Complex Urban-Natural Environments	Omar I Abdul Aziz	Civil and Environmental Engineering
Pulley Ridge Fisheries Bio-economic Modeling Project	Mahadev G Bhat	Earth and the Environment
DEEPEND: Deep-Pelagic Nekton Dynamics of the Gulf of Mexico	Heather Denise Bracken-Grissom	Biology
LTER: FCE LTER III - Coastal Oligotrophic Ecosystems Research: Briceno FCE LTER III: Legacies	Henry O Briceno	Southeast Environmental Research Center
Design and implementation of dye-tracer injection test, Cudjoe Key, Florida Keys	Henry O Briceno	Southeast Environmental Research Center

<p> LTER: FCE LTER III - Coastal Oligotrophic Ecosystems Research: Gaiser LTER III:Infrastructure </p>	Evelyn E Gaiser	Environment, Arts, and Society
<p> LTER: FCE LTER III - Coastal Oligotrophic Ecosystems Research: FCE LTER III:: REU </p>	Evelyn E Gaiser	Environment, Arts, and Society
<p> LTER: FCE LTER III - Coastal Oligotrophic Ecosystems Research: Heithaus LTER III:Trophic Dyna </p>	Michael R Heithaus	Environment, Arts, and Society
<p> LTER: FCE LTER III - Coastal Oligotrophic Ecosystems Research: Jaffe LTER III: Organic Matter </p>	Rudolf Jaffe	Chemistry
<p> LTER: FCE LTER III - Coastal Oligotrophic Ecosystems Research: Kominoski LTER III: Biogeochem </p>	John Stephen Kominoski	Biology
<p> LTER: FCE LTER III - Coastal Oligotrophic Ecosystems Research: Price FCE LTER III: Water </p>	Rene M Price	Earth and the Environment
<p> HABITAT SELECTION & MOVEMENT OF EVERGLADES FISHES IN RESPONSE TO SEASONAL HYDROLOGY: effects of variation in water levels & reversals </p>	Jennifer Schopf Rehage	Earth and the Environment
<p> RAPID: A hyper-thermal anomaly in the Florida Reef Tract: An opportunity to explore the mechanisms underpinning patterns of coral bleaching and disease </p>	Mauricio Rodriguez-Lanetty	Biology
<p> Sustainable Allow Design: Searching for Rare Earth Element Alternatives through Crystal Engineering </p>	Surendra K Saxena	Mechanical and Material Engineering
<p> Hiring a consultant to conduct an environmental assessment of The Wolfsonian. </p>	Casey P Steadman	The Wolfsonian
<p> LTER: FCE LTER III - Coastal Oligotrophic Ecosystems Research: Troxler FCE LTER III </p>	Tiffany Grace Troxler	Southeast Environmental Research Center
<p> Greenhouse Gas Inventory and Analyses for Agriculture and LULUCF </p>	Tiffany Grace Troxler	Southeast Environmental Research Center
<p> Sustainability Related Research Fiscal Year 2015 </p>		
<p> December </p>		

Title	PI	Department
Everglades Restoration and Public Meeting	Daniel Matthew Blaeuer	Communication Arts
DEEPEND: Deep-Pelagic Nekton Dynamics of the Gulf of Mexico	Kevin Mershon Boswell	Biology
LTER 5: Understanding Environmental Change in Northeast Puerto Rico	Todd Alan Crawl	Biology
West Africa Water Supply-BF	Maria C Donoso	Earth and the Environment
West Africa Water Supply-Ghana	Maria C Donoso	Earth and the Environment
Simultaneous Waste Heat and Water Recovery from Power Plant Flue Gases for Advanced Energy System	Chengxian Lin	Mechanical and Material Engineering
Human Impacts to Coastal Ecosystems in Puerto Rico (HICE-PR): A remote sensing, hydrologic, ecologic and socio-economic assessment with management implications	Shimelis Gebriye Setegn	Environmental and Occupational Health
November		
Title	PI	Department
WATER QUALITY MONITORING PROJECT FOR THE FLORIDA KEYS NATIONAL MARINE SANCTUARY (FKNMS)	Henry O Briceno	Southeast Environmental Research Center
Evaluating the mechanisms that drive nutrient-induced coral disease and bleaching	Deron Burkepile	Biology
Environmental Friendly Processing of Low Cost Flexible Copper Zinc Tin Sulfide (CZTS) Thin Film Solar Cells	Zhe Cheng	Mechanical and Material Engineering
Integrated Water Resource Management	Maria Donoso	Earth and the Environment
Solar Energy Technologies: Fundamentals and Applications in Buildings	Chengxian Lin	Mechanical and Material Engineering
LILA: Phase V: Loxahatchee Impoundment Landscape Assessment Tree Island, Ridge and Slough Studies: Phase V: Price	Rene M Price	Earth and the Environment

Assessment of water and constituent transport in the L31N canal following two hydraulic alterations to flow within and to the Everglades National Park	Rene M Price	Earth and the Environment
LILA: Phase V: Loxahatchee Impoundment Landscape Assessment Tree Island, Ridge and Slough Studies: Phase V: Ross	Michael S Ross	Earth and the Environment
October		
Title	PI	Department
Fairchild Tropical Botanic Garden supports research and education in tropical botany. As a tangible expression of this support, they provide graduate student support for individuals working for higher degrees in areas of tropical plant science.	Eric J Bishop-Von Wettberg	Biology
Ecological and Evolutionary Forces Reshaping Mutualism During Species Introductions	Eric J Bishop-Von Wettberg	Biology
Rwanda Integrated Water Security Program (RIWSP)	Maria C Donoso	Earth and the Environment
Seagrass Monitoring in the Florida Keys National Marine Sanctuary - FY 2010-2011	James W Fourqurean	Biology
Monitoring of Tree Island Condition in the Southern Everglades	Daniel Gann	Library Operations
FIU Urban Forestry Internship Program	Thomas Randolph Hartley	Parking and Transportation
Sheetflow Effects and Canal Backfilling on Sediment Source and Transport in the DECOMP Physical Model: Analysis of Molecular Organic Biomarkers	Rudolf Jaffe	Chemistry
Bioassays for Determining Bioavailable Dissolved Organic Nitrogen (BDON) in the Caloosahatchee River Water Column	Rudolf Jaffe	Chemistry
Collaborative Research: Scale, Consumers and Lotic Ecosystem Rates (SCALER)	John Stephen Kominoski	Biology
GA for the Fairchild Challenge educational program	Hong Liu	Earth and the Environment

Conservation ecology of selected plants in Halmahera, Indonesia Graduate Assistantship for Melissa Abdo	Hong Liu	Earth and the Environment
Collaborative Proposal: Quantifying the footprint of a dominant organism: Biogeochemical impacts of leaf cutter ants in a lowland tropical forest ecosystem	Steven Oberbauer	Biology
Hydrological Conditions of Mangrove Lakes Region of Everglades National Park	Rene M Price	Earth and the Environment
Fairchild Tropical Botanic Garden supports research and education in tropical botany. As a tangible expression of this support, they provide graduate student support for individuals working for higher degrees in areas of tropical plant science.	Jennifer H Richards	Biology
LILA: Phase V: Loxahatchee Impoundment Landscape Assessment Tree Island, Ridge and Slough Studies	Leonard Scinto	Earth and the Environment
Human Impacts to Coastal Ecosystems in Puerto Rico (HICE-PR): A remote sensing, hydrologic, ecologic and socio-economic assessment with management implications.	Shimelis Gebriye Setegn	Environmental and Occupational Health
Surface Water - Groundwater Interaction in Everglades Tree Islands: Hydrological Restoration of Degraded Tree Islands	Tiffany Troxler	Southeast Environmental Research Center
Ecological Monitoring of Water and Habitat Quality Associated with the C-111 Spreader Canal Project	Tiffany Troxler	Southeast Environmental Research Center
September		
Title	PI	Department
Florida Caribbean Consortium for Agriculture Education and Hispanic Workforce Development	Mahadev G Bhat	Earth and the Environment
Deducing the genomic footprint and functional impact of chickpea domestication on nitrogen fixation	Eric J Bishop-Von Wettberg	Biology

Examining the status and distribution of reef fish spawning aggregations in the Southeast Florida Coral Reef Initiative (SEFCRI) Region	Kevin M Boswell	Biology
Development of Reduced Order Model for Reacting Gas-Solid Flow using Proper Orthogonal Decomposition	Seckin Gokaltun	ARC Applied Research Center
Collaborative Research: Management and Implementation of the U.S. Arctic GEOTRACES Study	David Kadko	ARC Applied Research Center
Florida International University's Research Support to the Department of Energy's Office of Environmental Management	Leonel E Lagos	ARC Applied Research Center
GA for the Fairchild Challenge educational program	Hong Liu	Earth and the Environment
Using interannual variations in the hydrologic regime to predict spawning, recruitment, and angler catches of a recreationally important fish in the Everglades	Jennifer S Rehage	Earth and the Environment
Landscape pattern - Marl Prairie/Slough Gradients	Jay P Sah	Earth and the Environment
Monitoring of Tree Island Condition in the Southern Everglades	Jay P Sah	Earth and the Environment
Assessing Near-Field and Landscape Scale Ecological Effects of the Modified Water Deliveries and Comprehensive Everglades Restoration Plan Projects in Northeast Shark River Slough, Everglades National Park	Leonard J Scinto	Earth and the Environment
Siloxanes in Biogas: Formation and Effect on Biogas Quality and Energy Costs	Berrin Tansel	Civil and Environmental Engineering
Analyzing The Impact of The Intermediate Operating Plan(IOP) in The Eastern Everglades, Everglades National Park	Joel C Trexler	Biology
August		
Title	PI	Department
Examining the status and distribution of reef fish spawning aggregations in the Southeast Florida Coral Reef Initiative (SEFCRI) Region	Kevin Boswell	Biology

Submerged Aquatic Vegetation & Water Quality Monitoring	James Fourqurean	Biology
Hydrological Conditions of Mangrove Lakes Region of Everglades National Park	Rene Price	Earth and the Environment
Bonefish declines in Florida Bay: an integrative geospatial retrospective analysis of patterns & drivers	Jennifer Rehage	Earth and the Environment
CSR: Small: Improving Data Center Water Efficiency via Online Resource Management0	Shaolei Ren	Computer Info Sciences
R-EMAP IV: R-EMAP IV - Richards	Jennifer Richards	Biology
Fairchild Tropical Botanic Garden supports research and education in tropical botany. As a tangible expression of this support, they provide graduate student support for individuals working for higher degrees in areas of tropical plant science.	Jennifer Richards	Biology
Landscape Pattern-Ridge, Slough & Tree Island Mosaics	Michael S Ross	Earth and the Environment
R-EMAP IV: R-EMAP IV - Scinto	Leonard Scinto	Earth and the Environment
Ecological Assessment of Florida Bay and adjacent Mangrove Wetlands	Tiffany Troxler	Southeast Environmental Research Center
A multi-proxy study of environmental change and ecological regime shift detection in Florida Bay and Biscayne Bay, Florida (USA) over the last ~100-1000 years	Anna H Wachnicka Kosiorek	Southeast Environmental Research Center
July		
Title	PI	Department
Aquaris Reef Base	James Fourqurean	Biology
URS Arquaris Mission	James Fourqurean	Biology
Acquisition, Curation, Mapping and Submission of Accession Information to U.S Department of Agriculture Agriculture Research Service (USDA-ARS) Germplasm Resources Information Network (GRIN)	Daniel Gann	Library Operations

Quantifying Asymmetries of Precipitation and Convection in Tropical Cyclones and Their Relationship to Storm Intensity Changes Based on 14 Years of TRMM Data	Haiyan Jiang	Earth and the Environment
Florida International University's Research Support to the Department of Energy's Office of Environmental Management	Leonel Lagos	ARC Applied Research Center
Modeling of Nutrient Exchange Program for the Everglades	Fernando Miralles-Wilhelm	Earth and the Environment
Electric Power Reliability & Analytics Center (EPRAC) for High Penetration Distributed Renewable Resource Modern Grid System	Arif Islam Sarwat	Electrical and Computer Engineering
Provide office services and operational technical support to the South Florida Ecosystem Restoration Task Force, Office of the Executive Director	Leonard Scinto	Earth and the Environment
Freshwater fish monitoring in the Water Conservation Area 3 and Everglades National Park	Joel Trexler	Biology
A multi-proxy study of environmental change and ecological regime shift detection in Florida Bay and Biscayne Bay, Florida (USA) over the last ~100-1000 years	Anna H Wachnicka Kosiorek	Southeast Environmental Research Center
June		
Title	PI	Department
Pulley Ridge Fisheries Bio-economic Modeling Project	Mahadev G Bhat	Earth and the Environment
Importance of reef complexity on the distribution of reef-associated fishes: contrasting natural and restored reefs	Kevin Boswell	Biology
Cascading interactions of herbivore loss and nutrient enrichment on coral reef macroalgae, corals, and microbial dynamics	Deron Burkepile	Biology
Quantifying parrotfish grazing on coral reefs: developing a metric for management and conservation	Deron Burkepile	Biology

Florida International University's Research Support to the+ Department of Energy's Office of Environmental Management: Sub Project 2-FIU'S Environmental Research, Development	Yong Cai	Chemistry
West Africa Water Supply	Maria C Donoso	Earth and the Environment
Water Availability and Integrated Water Resources Management in Northern Haiti	Maria C Donoso	Environment, Arts, and Society
CAREER: Measuring the thermal tolerances of individuals, populations, and species and predicting plant species responses to climate change in the tropical Andes	Kenneth J Feeley	Biology
Aquarius Reef Base: NEEMO_18_NASA	James Fourqurean	Biology
Cocothrinax Jimenezii Conservation Biology	F Javier Francisco Ortega	Biology
Sea Level Rise: South Florida	Robert Gutsche	Journalism and Broadcasting
Florida International University's Research Support to the Department of Energy's Office of Environmental Management	Leonel Lagos	ARC Applied Research Center
Florida International University's Research Support to the Department of Energy's Office of Environmental Management: Sub Project 1-FIU'S Environmen	Leonel Lagos	ARC Applied Research Center
Florida International University's Research Support to the Department of Energy's Office of Environmental Management: Sub Project 3- Rapid Deployment of Engineered Solutions for Enviromental Problems at Hanford (DOE-RFL)	Leonel Lagos	ARC Applied Research Center
Florida International University's Research Support to the Department of Energy's Office of Environmental Management: Sub project 3- Remediation and Treatment Tech Development and Support	Leonel Lagos	ARC Applied Research Center

Florida International University's Research Support to the Department of Energy's Office of Environmental Management: Waste and D&D Engineering and Technology Development and Support	Leonel Lagos	ARC Applied Research Center
Collaborative Proposal: Quantifying the footprint of a dominant organism: Biogeochemical impacts of leaf cutter ants in a lowland tropical forest ecosystem	Steven Oberbauer	Biology
Monitoring for Potential Water Quality Impacts along the Eastern Boundary of Everglades National Park, Including Taylor Slough	Tiffany Troxler	Southeast Environmental Research Center