The Florida Coastal Everglades (FCE) LTER program encompasses the subtropical freshwater wetlands, mangrove swamps, and shallow seagrass communities along the two main drainages of Everglades National Park. Fresh and marine water sources are variable in this coastal oligotrophic landscape, and interact with biogeochemical processes and human actions to modify coastal ecosystem structure, functions, and services. Since 2000, the FCE LTER program has transformed scientific understanding of the origins of coastal ecosystem productivity, particularly how nutrients regulate ecosystem response to disturbances such as tropical storms, droughts, cold snaps, shifts in freshwater management, and sea level rise.

By pairing sustained long term measurements with experiments, socio-economic studies, and modeling, the FCE LTER program fosters a mechanistic understanding of ecosystem function that influences restoration policy. The program is especially poised to address how the chronic stress of sea level rise affects ecosystem resilience and how disturbance legacies, social-ecological feedbacks, and regional freshwater allocation decisions may modify stress responses.