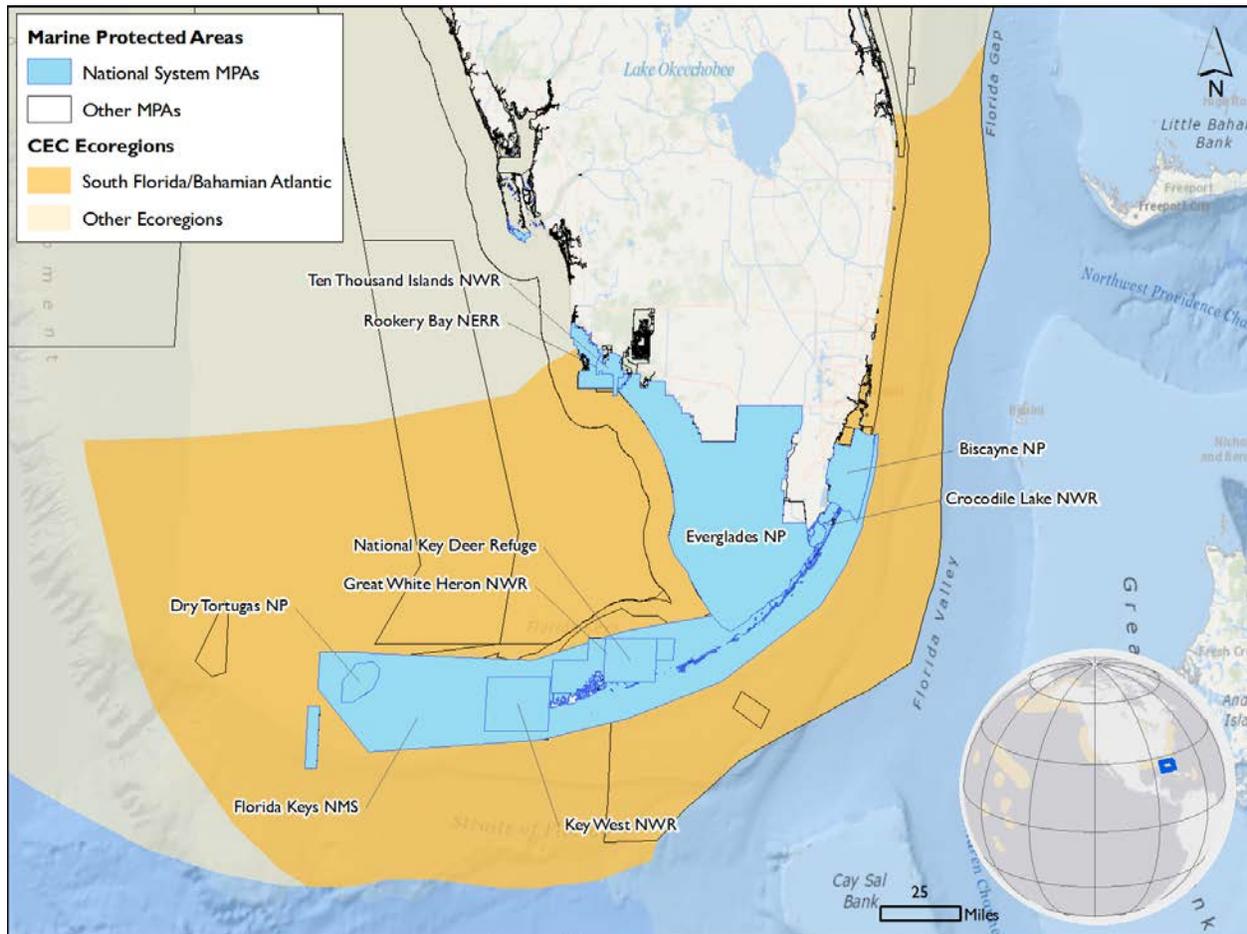


South Florida/Bahamian Atlantic (Ecoregion 12)

Background

The South Florida/Bahamian Atlantic Ecoregion extends from the mangrove-dominated coast of southwest Florida along the Gulf of Mexico, through the Florida Keys and up the Atlantic coast of the heavily urban southeast Florida. The ecoregion is tropical to subtropical, with generally clear waters, coral reefs, seagrass-dominated substrates and sandy substrate derived from mainly algae and corals. The continental shelf tends to be very wide in southwest Florida (150 km) and very narrow along the southeast Florida Atlantic coast (5 km). The Gulf Stream moves through the region and along with the Loop Current makes for an oceanographically complex but biologically rich area.



MPAs in South Florida/Bahamian Atlantic

There are 92 MPAs in the South Florida/Bahamian Atlantic Ecoregion. With the exception of Dry Tortugas National Park, all MPAs within the ecoregion are primarily shallow-water and coastal. Ten of the ecoregion's MPAs (11%) are National System members, 39 (42%) are eligible but are not currently National System MPAs, and 43 (47%) are not eligible to become National System MPAs (Figure 1).

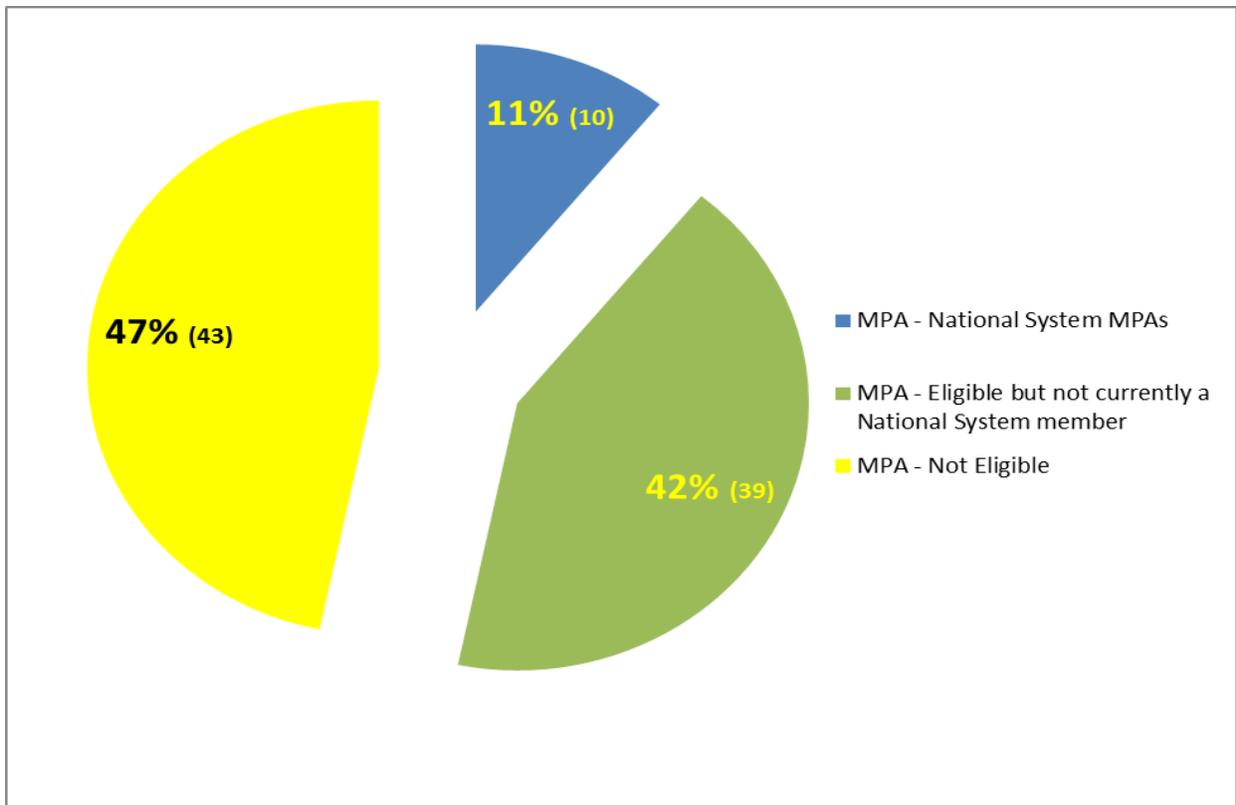


Figure 1. Percent of Marine Protected Areas (MPAs) within the South Florida/Bahamian Atlantic (Ecoregion 12) that are members of the National Systems of MPAs (n=92)

The ten National System MPAs in the ecoregion include some of the best known and best studied natural areas in the country, including national parks (Biscayne, Dry Tortugas, Everglades), national wildlife refuges (Crocodile Lake, Great White Heron, Key West, National Key Deer, Rookery Bay, Ten Thousand Islands) and the Florida Keys National Marine Sanctuary. These areas are dominated by important tropical habitats (e.g., seagrass, mangroves, corals) that support a wide variety of ecologically and economically estuarine, marine and coral-dependent fish and wildlife.

Ecologically important biogenic habitats known to be found in the ecoregion are widely found throughout its MPAs. Mangroves are present in 74% of the ecoregion's MPAs, wetlands in 41%, seagrass in 84%, and corals in 61% (Figure 2).

There is very little presence of flowing freshwater found in the ecoregion with only 10 of the 92 MPAs (11%) reporting this resource within their boundaries, although two of these areas (Everglades National Park and Rookery Bay National Estuarine Research Reserve) are very ecologically important regionally. Because of the lack of flowing freshwater, the number of anadromous fish reported is corresponding low (e.g., only three sites or just 3% of the MPAs in the ecoregion) (Figure 3).

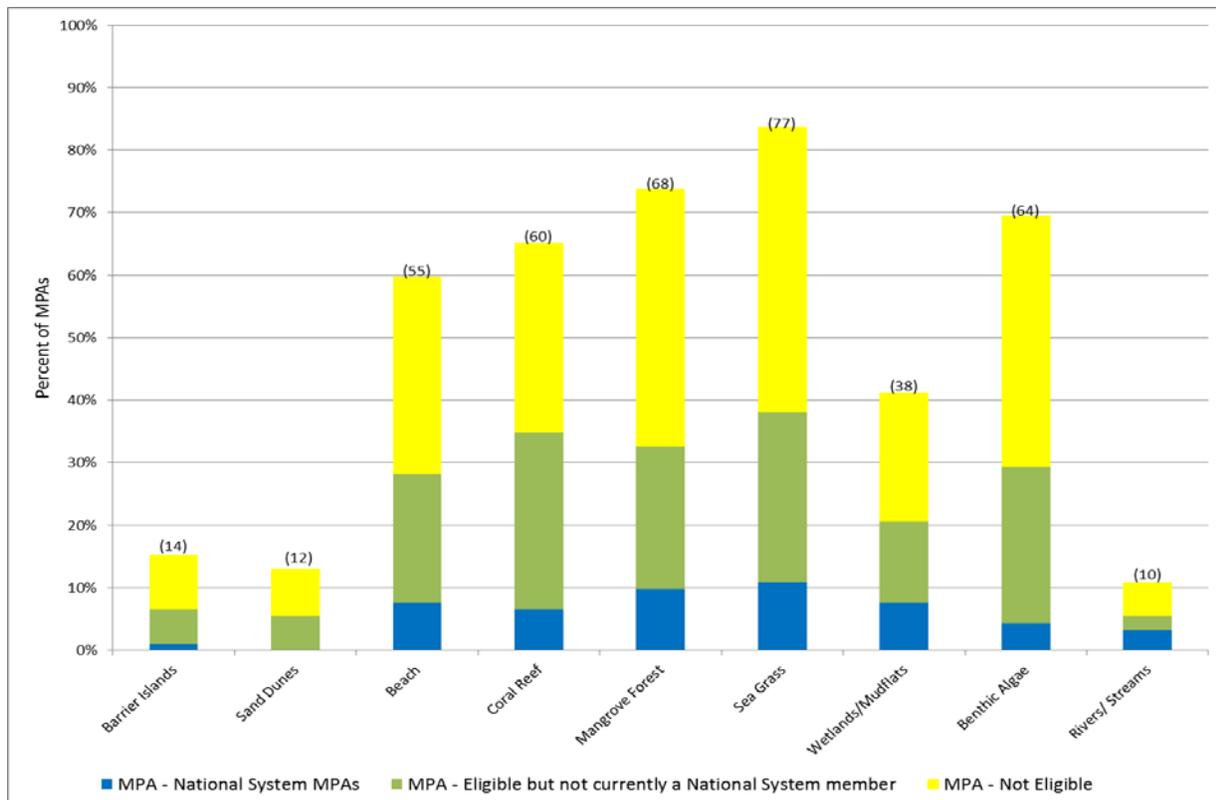


Figure 2. Percent of MPAs that contain certain habitat groups in the South Florida/Bahamian Atlantic (Ecoregion 12)

Various types of marine fishes are widely found throughout many of the ecoregion's MPAs, including estuarine/coastal fishes in 63%, coastal pelagic fishes in 65%, reef fishes in 82%, and highly migratory species in 37% (Figure 3).

Birds are classified as waterfowl, estuarine or seabirds, signifying where their principal feeding areas occur, and are found in 66%, 86%, and 83%, respectively of the ecoregion's MPAs (Figure 4). South Florida is famous for its iconic reptiles. Alligators have inhabited Florida's marshes, swamps, rivers and lakes for centuries and are a common sight in Everglades National Park and many other MPAs in the ecoregion. American crocodiles are found primarily in south Florida living in brackish and saltwater habitats such as ponds, coves and creeks of mangrove swamps, such as Crocodile Lake National Wildlife Refuge at the northern end of the Florida Keys. Recently, crocodiles have moved northward within their range and even inland into freshwater areas of southeast Florida. As the ecoregion boundaries describe only marine areas, neither of these reptiles are listed as present in the MPA Center Inventory database.

The ecoregion's benthic algae and invertebrates are both ecologically and economically important. Excess benthic algae harm coral reefs and are found in approximately 72% of the ecoregion's MPAs (Figure 5). Benthic invertebrates include such examples as the Florida spiny lobster (*Panulirus argus*) and Queen Conch (*Strombus gigas*) and are found in 92% of the ecoregion's MPAs (Figure 5).

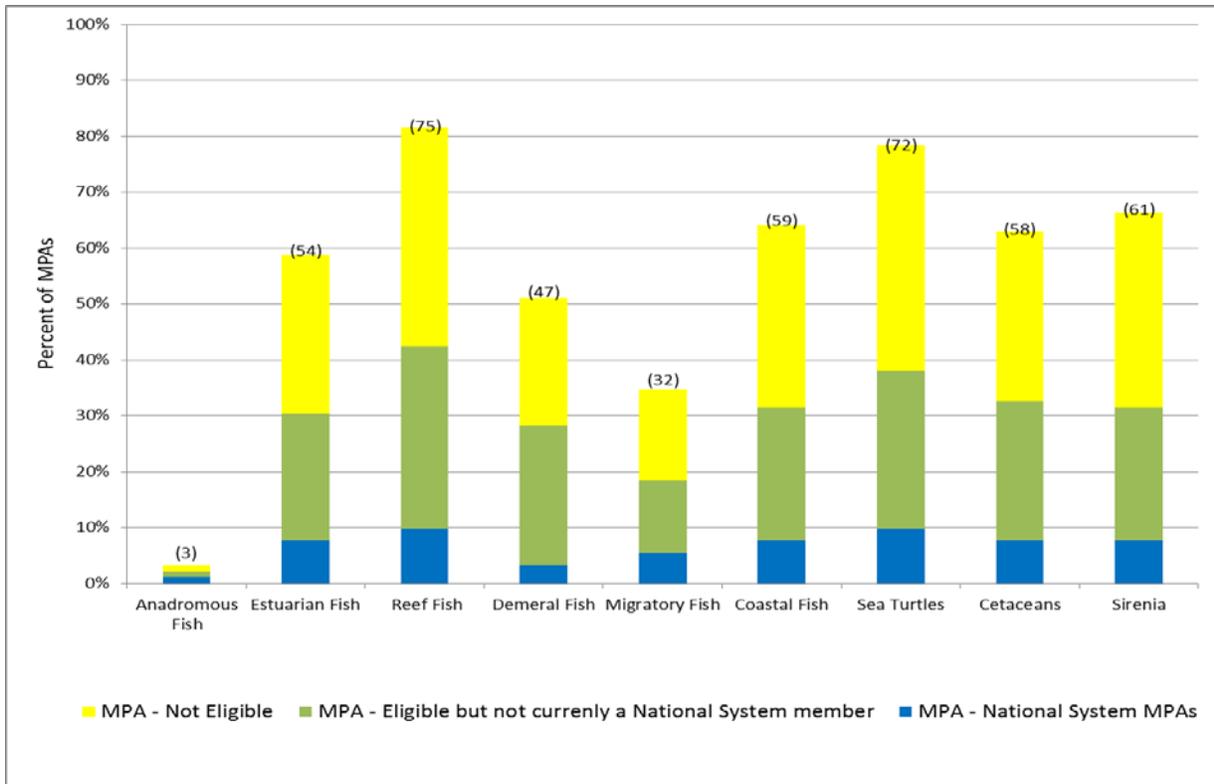


Figure 3. Percent of MPAs that contain certain Fish and Marine Mammal Groups in the South Florida/Bahamian Atlantic (Ecoregion 12)

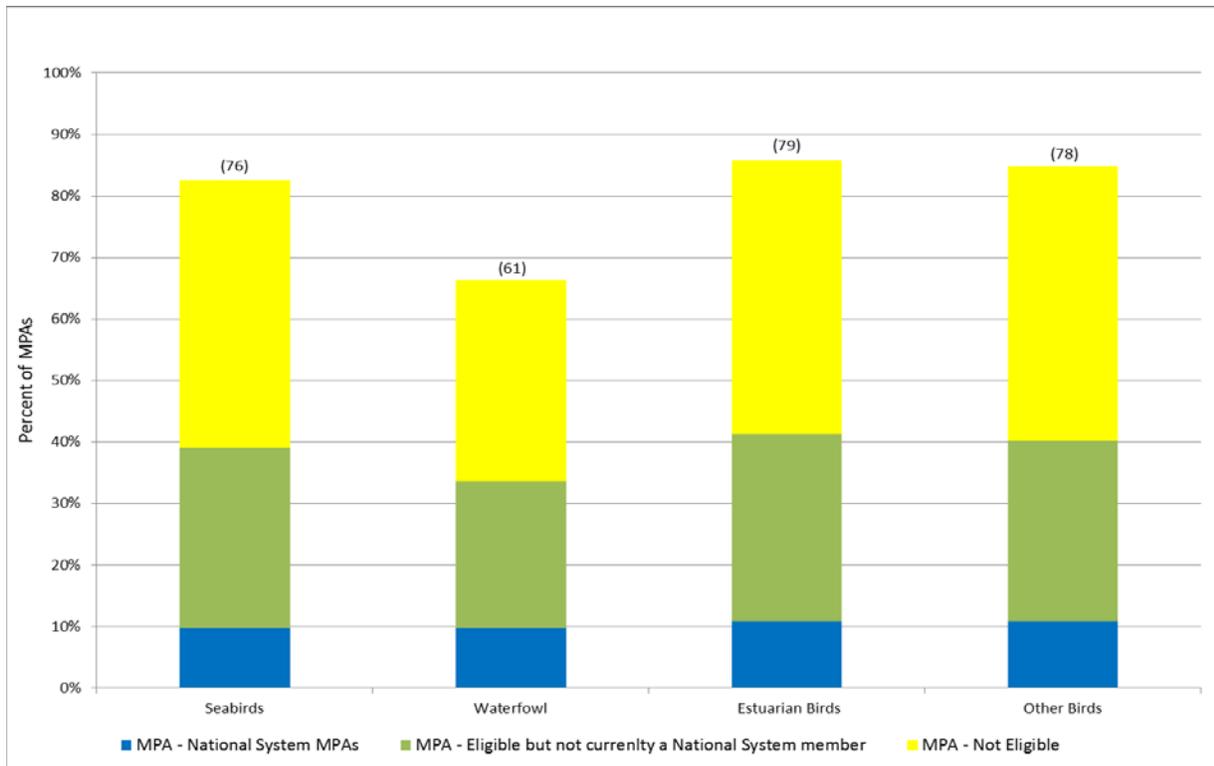


Figure 4. Percent of MPAs that contain Marine Birds and reptiles in the South Florida/Bahamian Atlantic (Ecoregion 12)

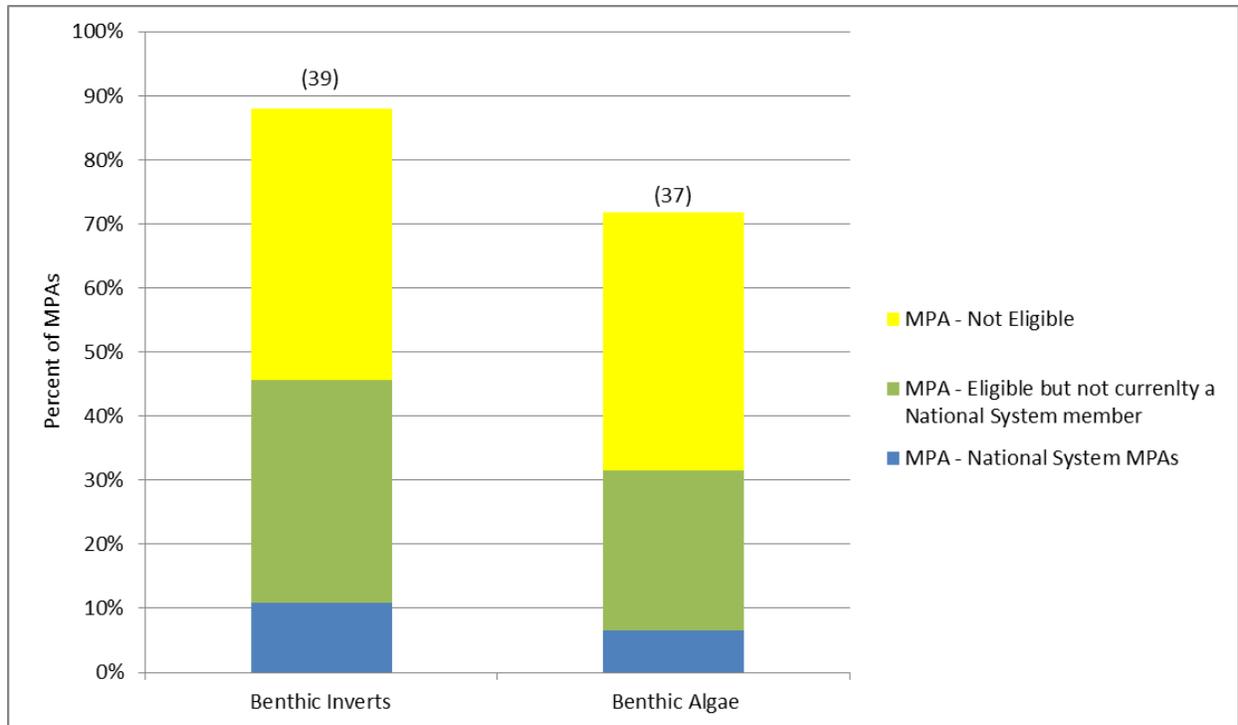


Figure 5. Total number of MPAs that contain Marine Birds and reptiles in the South Florida/Bahamian Atlantic (Ecoregion 12)

Marine mammals and sea turtles are commonly found throughout the ecoregion’s MPAs, cetaceans in 64%, sirenids (manatees) in 66%, and sea turtles in 76% (Figures 5-6). Ecologically important areas that support where species breed, nest, spawn and rest can be found throughout the ecoregion. For example, Figure 6 illustrates that nursery grounds are found in 66% of the ecoregion’s MPAs; bird nesting habitat in 71%; bird migratory areas in 63% and turtle nesting areas in 40%.

Conclusions

The 92 MPAs in this ecoregion contain the major habitat and species groups and ecologically important areas found in the ecoregion as a whole. These resources are also frequently found in more than one MPA, resulting in some replication of ecological features (species, habitats and ecological processes) -- one of the criteria identified by the Convention on Biological Diversity (CBD) in designing effective MPA networks.

Suggested reading:

The *Marine and Estuarine Goal Setting for South Florida* (<http://sofla-mares.org/>) project represents a collaboration between academic scientists, federal and state agencies experts and non-governmental environmental organizations and works in close conjunction with agency managers, private industry stakeholders and interested members of the public. MARES defines characteristics of much of Ecoregion’s 12 South Florida coastal marine ecosystem that is both sustainable and capable of providing the diverse ecological services upon which our society depends.

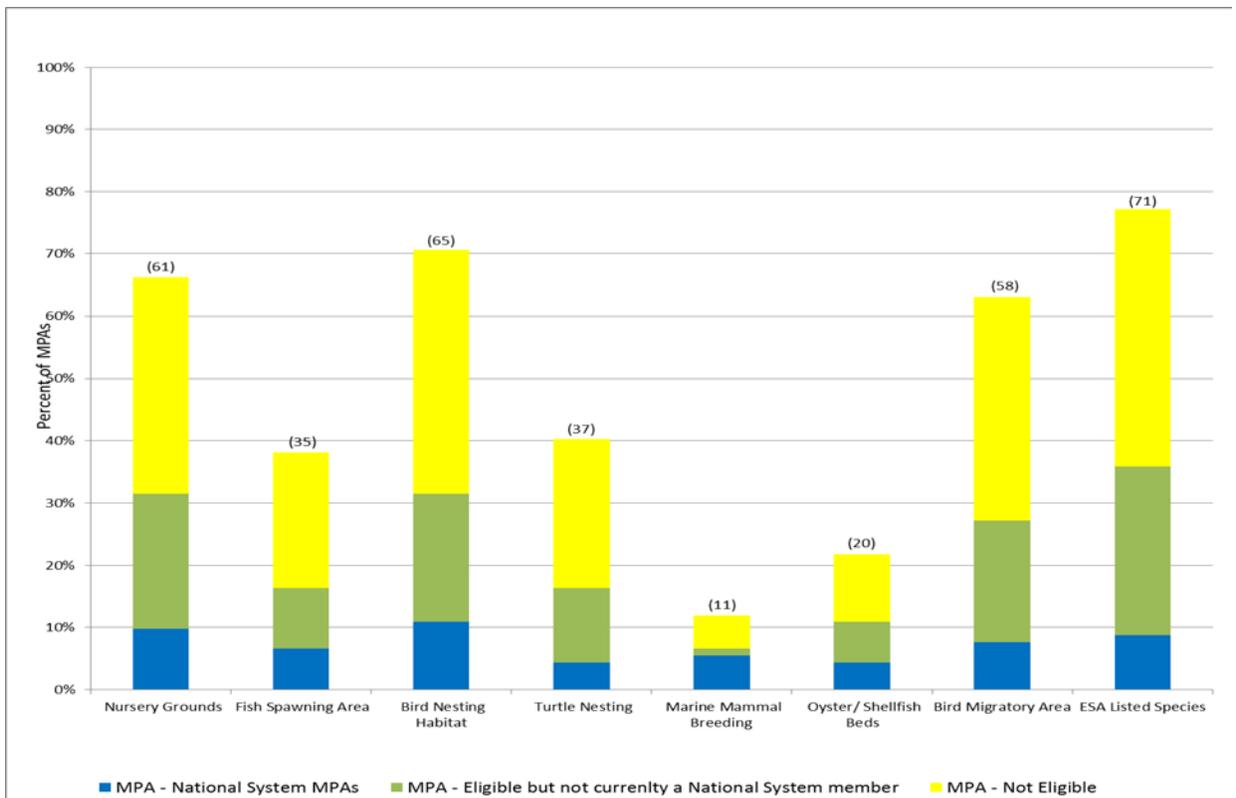


Figure 6. Percent of MPAs with ecologically important areas in the South Florida/Bahamian Atlantic (Ecoregion 12)