

Fostering Flats Conservation and Stewardship in the Bahamas

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At the interface of land and sea, flats and their associated shallow environments provide a range of ecosystem services including stabilization of sediments, nutrient cycling, and providing habitat for a diversity of fish and invertebrates. Flats ecosystems in The Bahamas support one of the most productive fisheries in the world. Anglers travel to The Bahamas to fish the crystal clear waters of the flats for bonefish (*Albula vulpes*) and other species. A recent study of the importance of recreational flats fishing revealed that flats fishing generates \$141 million of economic value to the Bahamian economy annually with direct angler expenditures for flats fishing activities supporting the equivalent of 2500 Bahamian jobs.

Unfortunately, nearshore flats also tend to be the focal point of coastal development which often entails clearing sites of all vegetation, altering shoreline areas, and dredging to accommodate marinas, harbors, and high density residential or resort development. This type of development and its associated human activities result in habitat destruction, declines in biodiversity, and loss of critical ecosystem services. Given their ecological and economic importance, the conservation and protection of flats ecosystems is imperative to the future of The Bahamas.

To foster increased awareness about the importance of coastal flats habitats and the responsibility for their conservation, the Fisheries Conservation Foundation (FCF), Bonefish and Tarpon Trust (BTT), and Bahamas National Trust (BNT) have come together to form the Bahamian Flats Fishing Alliance (BFFA), a unique multilateral partnership. The goals of the BFFA are to a) provide scientific assistance and advice to efforts within the Bahamian fishing industry to organize a national association of guides and lodge owners to lead conservation efforts; b) conduct collaborative research and education/outreach projects addressing management and conservation issues of the flats environment and its fisheries; c) develop and implement an effective campaign to communicate the findings of such efforts to relevant policy-makers, resource managers, and the public; d) assist decision-makers in developing scientifically sound strategies to address relevant fisheries and coastal resource issues; and e) encourage public support for such strategies.

Accomplishments of the BFFA to date include conducting an economic study on the impact of flats fishing to the economy of The Bahamas, holding the first Bahamas Bonefish Conference, and fostering formation of a Bahamian Flats Fishing Guide Association (BFFGA). To better understand bonefish biology and ecology, identify key linkages in flats ecosystems, and assess the role of natural and anthropogenic disturbances on these inshore habitats scientists affiliated with BFFA member organizations and the Cape Eleuthera Institute (CEI) are using an integrated research approach to determine when and where bonefish spawn, assess the potential impacts of global climate change, identify the best ways to catch and release bonefish to maximize their survival, and study what habitats are critical for which life stages and how they impact bonefish growth, maturation, and longevity. The relationship with the BFFGA is an essential component of BFFA's work. By collaborating with the fly fishing guides, they become part of the data gathering process and are invested partners in research and conservation.

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