

Proposal #: 20SER024-060

Project Title: Strengthening the Supply Chain for Lionfish to Promote Fishing and Protect Native Species

Applicant: Reef Environmental Education Foundation

Priority Addressed Priority #2 – Science or Technology that Promotes Sustainable U.S. Seafood Production and Harvesting

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Abstract: Over the past several years, design and testing of innovative, lionfish traps that are baitless and FAD-based has yielded encouraging results. Non-containment lionfish traps that reduce bycatch, eliminate risk of ghost fishing and take advantage of the natural tendency of lionfish to associate near structure and manmade objects have been tested by several research and volunteer organizations, in consultation with Dr. Steve Gittings (NOAA), who designed the traps. Our objectives are to test and modify the NC trap to optimize design to ensure; gear deployment speed and accuracy (near target site), deployment success (opens successfully), and minimal risk of bycatch or movement of traps post-deployment, and (2) study trap efficacy or its ability to be used to capture lionfish in mesophotic habitats. The proposed project will build off years of experience by groups that have been directly and indirectly examining the use of traps to capture lionfish from deep-water habitats. The collaboration of Florida Keys commercial trap fishermen with the PI, project manager and contributing partners listed below will provide the intellectual and field support needed to ultimately determine if a NC lionfish trap is an effective and viable fishing method to target populations in deep-water.

Summary of potential commercial benefits to the fishing community of the research results: This project directly impacts fisheries through the development of a trap technology that will (1) strengthening an existing, underdeveloped market and (2) create opportunities for U.S. fishing communities. It better connect segments of the lionfish supply chain, specifically from harvesting to processing by targeting under-fished populations in mesophotic habitats. Included within the scope of the project, is strong collaboration with the professional fishing community to improve trap design and catch rates by utilizing their knowledge for successful deployment and site selection. Widespread trap use may significantly reduce the impacts of lionfish on native deep-water communities, including those of commercial interest.
