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**Hope Spot Declared at Golfo Dulce Costa Rica in Support of Nursery for
Endangered Scalloped Hammerhead Sharks**

GOLFO DULCE, COSTA RICA, (February 12th, 2019) – There aren't many creatures on Earth that offer a remarkable resemblance to the mythical beings we imagined from our childhood storybooks. The endangered scalloped hammerhead shark, with its famous laterally shaped head carrying eyeballs on either side, is perhaps one of these mysterious manifestations that awe those of us on land. Unfortunately, the scalloped hammerheads are endangered, due to overfishing in Golfo Dulce. Golfo Dulce in Costa Rica is an exceptional ecosystem that hosts a nursery for the scalloped hammerhead shark, with thousands of baby sharks born there every year. Recent research suggests evidence of a biological connection between the scalloped hammerheads in critical coastal habitats and the surrounding waters of Cocos Island, making the gulf, one of only four tropical fjords in the world, a crucial area to protect. The Costa Rican government has established the gulf as a sanctuary for the scalloped hammerhead, and there has been expressed interest in taking the conservation status of the sanctuary a step further with official legal protection of the gulf from illegal shark fishing practices and other negative impacts of human activities.

International non-profit Mission Blue has declared Golfo Dulce a Hope Spot in support of establishing official protection from the Costa Rican government to prevent the illegal fishing of scalloped hammerheads (*Sphyrna lewini*) in the gulf. Large amounts of juvenile hammerheads are often caught in the artisanal fishing lines and illegal nets, causing the scalloped hammerhead populations to fall to numbers considered to be "endangered" on the IUCN Red List.

Hope Spot Champion Andres Lopez says, "The declaration of Golfo Dulce as a Hope Spot recognizes the importance of this unique ecosystem for marine biodiversity, especially for scalloped hammerhead sharks."

As the worldwide demand for commercial fish grows, the populations of the endangered scalloped hammerhead continue to dwindle. As the juveniles are often too small to be harvested for their fins, fishermen have been using them as bait meat to capture larger sharks. The species is protected in oceanic islands, but there are few conservation efforts in coastal and nursery areas, leaving the future populations vulnerable.

Hope Spot Champion Ilena Zanella says, "The declaration of Golfo Dulce as Hope Spot highlights the importance of protecting nursery areas for scalloped hammerhead sharks and other migratory species."

Hope Spot Champions Ilena Zanella and Andres Lopez are marine biologists and founders of Mision Tiburon, a conservation organization dedicated to collecting research on animals including sharks, rays and sea turtles to encourage policy change to protect threatened species. In 2017 upon recording prominent populations of juvenile scalloped hammerhead sharks in the gulf's waters, they started a dialogue with the fishermen associations of Golfo Dulce to discuss a strategy for protection. Based on this strategy, in March 2018, the Fishing Commission of Golfo Dulce enacted temporary closures of bottom long lines from May to October of each year. In November 2018, Zanella and Andres signed an Agreement with the Ministry of Environment to strengthen the Scalloped Hammerhead Shark Sanctuary to include support of Surveillance and Protection Program in Golfo Dulce, implementation of educational programs, international promotion and scientific monitoring of the scalloped hammerhead shark population.

Carlos Manuel Rodríguez Echandi, Ministry of Environment and Energy says, "Although 92% of Costa Rican territory is ocean, in the last centuries, Costa Ricans and the development of the country has turned their backs to the seas. We have polluted and lost the ecological vitality of the ocean, as it is in the case of the Gulf of Nicoya. That is why it is vital for the Government of the Republic of Costa Rica to reverse these trends and seek the development of instruments and public policies to have cleaner and healthier marine ecosystems."

Lopez's and Zanella's research has revealed that the scalloped hammerhead shark is one of the most abundant species in the bottom long line fishing in Golfo Dulce, and it is the most common shark in the gulf. Their research has also identified shallow sites (5-7 m) along the coast where the newborns spend their first months and other deeper sites (25-30 m) where juveniles and sub-adults inhabit. In conclusion, Golfo Dulce holds an important critical habitat for the first years of life of the scalloped hammerhead shark. Additionally, their research has the first evidence of a biological connection for the

scalloped hammerhead between critical coastal habitats and the surrounding waters of Cocos Island. Beyond sharks, the gulf hosts a broad diversity of life with green sea turtles, humpback whales, rays and several species of coral that coexist with the scalloped hammerheads.

Andres Lopez explains, “The gulf has critical habitats for different vulnerable and endangered marine species; it is urgent to improve its protection and to promote in the local communities socio-economic alternatives integrated with the conservation of our marine life.”

Hope Spot Champion Ilena Zanella elaborates on the potential ripple effect of officially protecting the gulf. “This Hope Spot will encourage Costa Rica and other countries in the region to take care of our coasts, and to recognize that the beautiful aggregations of hammerhead sharks in oceanic islands (Cocos Island, Galápagos and Malpelo) are directly related to the health of our gulfs, bays, rivers and mangroves.” She continues, “Understanding the connection between different habitats is the key to achieving real conservation strategies for migratory species.”

Geiner Golfín, Chief of the Research Department of Isla del Coco National Park explains, “Isla del Coco [Cocos Island] and the Golfo Dulce are essential habitats for the life cycle of the scalloped hammerhead shark. It is necessary to join inter-institutional efforts to guarantee the sustainability of this endangered species and guarantee its enjoyment for future generations.”

Golfo Dulce is known for holding quite an extraordinary pocket of biodiversity. The serene waters of the tropical fjord – one of only four in the world – are home to magnificent animals like humpback and sperm whales, manta rays, bottlenose dolphins, corals, green sea turtles, snappers and hundreds of other shark species. The gulf is surrounded by rainy forests, mangroves and sandy beaches, with its waters divided into two distinct areas. The deepest point is called the Internal Zone, characterized with having a depression plunging to 200m deep. Circulation and water exchange in this area are restricted, causing lower oxygen and nutrient concentrations. The shallow external zone is only 12m wide and represents the mouth of the gulf, opening to the Pacific Ocean. The External Zone has a better flow of oxygen and an increased productivity due to nutrient inputs caused by tidal forces.

The Costa Rican government has expressed interest in taking the conservation status of the Sanctuary further, with the Ministry of Environment and Energy looking to enact official protection of the gulf’s waters to put an end to the shark fishing. The Rainforest Trust, Marine Action Fund and the Vice Ministry of Water and Sea have expressed their support of further protection of the gulf as well. The proper framework for official national protection of the scalloped hammerhead shark is already in place and marine biologists believe that if the sensitive populations of this species are defended from

human activities, it will in turn preserve the health of this rare ecosystem and all of the life within it for generations to come.

About Mission Blue

Led by legendary oceanographer Dr. Sylvia Earle, Mission Blue is uniting a global coalition to inspire an upwelling of public awareness, access and support for a worldwide network of marine protected areas – Hope Spots. Under Dr. Earle’s leadership, the Mission Blue team implements communications campaigns that elevate Hope Spots to the world stage through documentaries, social media, traditional media and innovative tools like Google Earth. Mission Blue embarks on regular oceanic expeditions that shed light on these vital ecosystems and build support for their protection. Mission Blue also supports the work of conservation NGOs around the world that share the mission of building public support for ocean protection. The Mission Blue alliance includes more than 200 respected ocean conservation groups and like-minded organizations.

About Mision Tiburon

[Mision Tiburon](#) is composed of young professionals committed to marine life and shark conservation. The leaders of this organization, Ilena Zanella and Andres Lopez, are marine biologists who have worked for several years in educational projects and marine research, especially with sharks, rays and turtles. During these years, they have acquired the experience and the knowledge to lead new marine conservation projects.