»» SPAW PROTOCOL (Specially Protected Areas and Wildlife)

Framework to regulate the protection of herbivorous fish and coral reefs of the Greater Caribbean

Herbivorous fish carry out fundamental ecological processes for coral reefs, the marine ecosystem most at risk from the global climate crisis.

At the global level, there is a 30 percent degradation of coral reefs and if the global temperature rises 1.5 ° C, the loss of up to 90 percent of these ecosystems is projected.[1]

In the Caribbean, degradation is 50 percent[2] and in the Mesoamerican Reef System, more than 90 percent.[3] The deterioration is associated with the combined anthropogenic impacts of global and local origin, such as ocean acidification, bleaching, destruction of coastal habitats, sargassum, pollution and poor fisheries management.[4-5]

Herbivorous fish are important to corals because they control the abundance of macroalgae and increase the nutrients that support the growth of coral communities and feed other reef fish.[6] In addition, their striking colours make them attractive species for tourist activities such as diving and snorkelling.[7]

Unfortunately, the environmental services that marine herbivory provides to coral reefs have not been adequately regulated. There are no adequate fisheries and conservation policies to keep parrotfish and diadema sea urchin populations ecologically functional.

For these reasons, it is recommended to effectively regulate the management of this group of fish to avoid further degradation of habitats at risk, Fisheries[8] and ecological management must also be improved, as well as the effective management of wildlife, in order to conserve herbivorous fish and thereby pay to restore the health of coral reefs.[9]

Regulatory framework of the Cartagena Convention and the SPAW Protocol

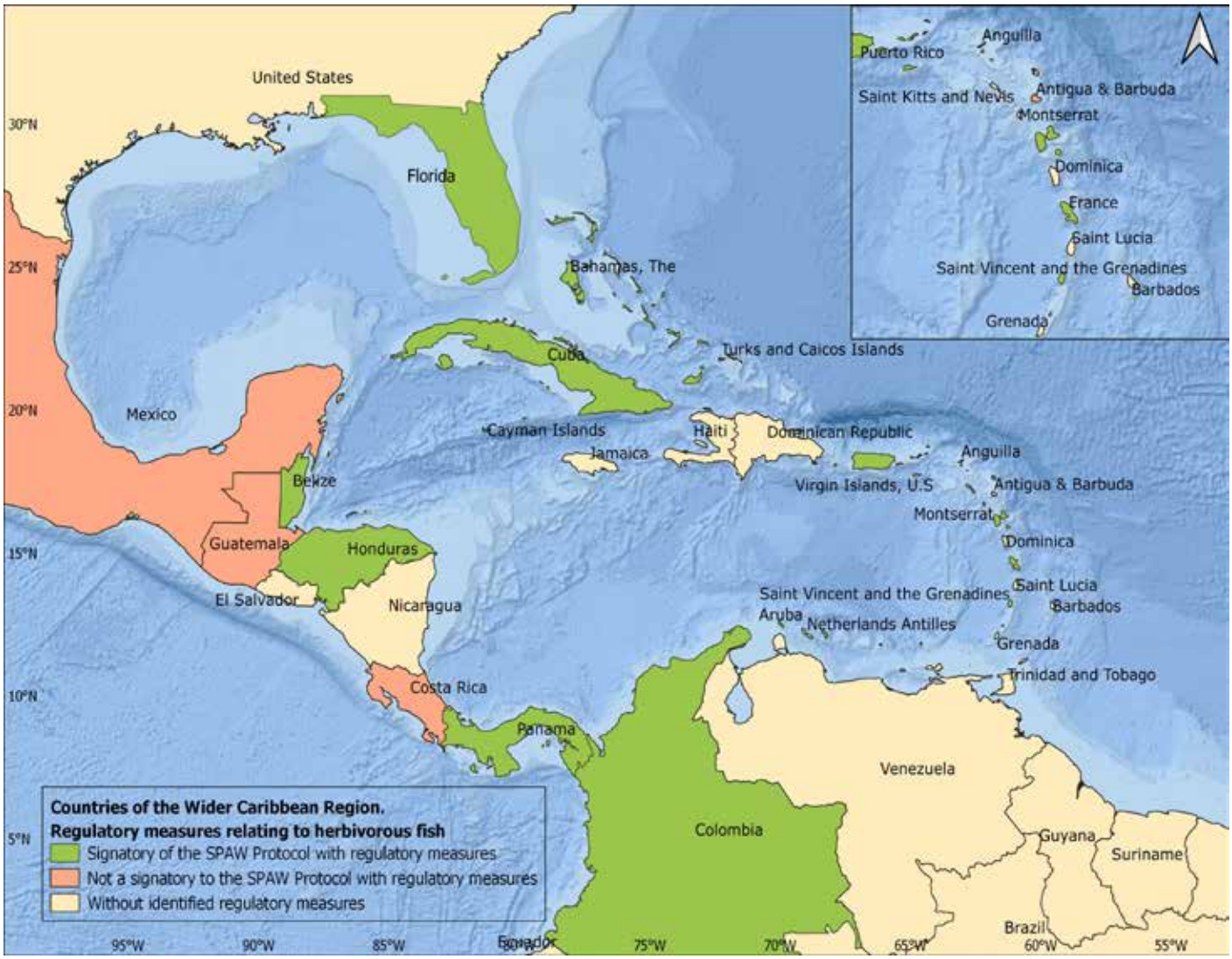
The Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region (Cartagena Convention) and its Protocol for Specially Protected Areas and Wildlife (SPAW Protocol) establishes that Contracting Parties have the obligation to regulate the protection of the vulnerable species and ecosystems of the region.

The revised criteria for the nomination of species (1,3,4,5,6 and 10) determines the need to include essential species for vulnerable ecosystems - such as coral reefs, mangroves and seagrasses - in the species lists of Annexes II and III of the SPAW Protocol.

The national or regional measures imply in a different way protection processes, biological monitoring of species, fishing recovery zones; analysis of catch data, health status of ecosystems, population dynamics and size; closed periods; and regulation of the capture, possession, transport, trade or total prohibition of the use of the species.[10]

In 2018, the Scientific and Technical Advisory Committee (STAC) prioritized the evaluation of herbivorous fish and currently the Species Working Group carries out the evaluation of parrotfish through the integration and analysis of scientific and regulatory data.

Eleven of the 17 countries that have signed the Protocol have generated regulatory measures on herbivorous fish. Some regulatory experiences are in force, others are not, and there are those that came into force recently. The following map and table show progress in the regulation of herbivorous fish in countries and island regions of the Greater Caribbean.



Regulatory experiences at the country and / or regional level

Species - Family	Regulatory Measures	Country (Region or island territory)	Date (Amendments)
Parrotfish	Total ban	United Kingdom (Bermuda)*	1978
Coral reefs	Total ban	Panama (Pacific and Caribbean Coast)	1994
Scarus *coelestinus, coeruleus y guacamaia*	Total ban	France (St. Barthelemy and Martinique)	2005 & Amendment 2016
Cryptotomus roseus, Nicholsina usta, ***Scarus*** *iseri, taeniopterus, vetula,* ***Sparisoma*** *atomarium, aurofrenatum, axillare, chrysopterum, griseorubrum radians, rubripinne, viride.*	Fishing in sizes > 20cm allowed with a maximum of 3 per person in recreational fishing	France (St. Barthelemy)	
Cryptotomus roseus, Nicholsina usta, ***Scarus*** *iseri, taeniopterus, vetula,* ***Sparisoma*** *atomarium, aurofrenatum, axillare, chrysopterum, griseorubrum radians, rubripinne, viride.*	Limited to 3 per person for recreation fishing	France (Martinique)	
Family Scaridae	Full protection	Belize	2009
Parrot fish	Ban	Kingdom of Netherlands (Bonaire and Aruba)	2010
Cryptotomus roseus, Nicholsina usta, ***Scarus*** *coelestinus, coeruleus, iserti, guacamaia, taeniopterus, vetula,* ***Sparisoma*** *atomarium, aurofrenatum, chrysopterum, radians, rubripinne, viride y Acanthuridae.*	Species of high environmental significance	Cuba	2011
Scarus *coelestinu, coeruleus y guacamaia*	Ban	United States (Puerto Rico and the Virgin Islands)	2013
Other species of parrot fish	Fishing management		
Parrot fish	No-fishing areas in protected areas	The Bahamas	2014
All species of parrot fish	Ban	Antigua & Barbuda*	2014
Family Scaridae	Ban	Guatemala* (Caribbean Coast)	2015
Parrotfish and Surgeonfish	Ban	Dominican Republic**	2017
Scarus *coelestinu, coeruleus y guacamaia*	Endangered species	Colombia	2017
Scarus vetula, Sparisoma viride	Near threatened species		
Parrot fish	Ban	St. Vincent and the Grenadines	2019
Scarus *coelestinu, coeruleus y guacamaia*	Prohibited in recreational fishing	France (Guadeloupe and St. Martin)	2019
Cryptotomus roseus, Nicholsina usta y Acanthuridae	Fishing allowed		
Scarus *coelestinus, coeruleus, iserti, guacamaia, taeniopterus, y vetula,*			
Sparisoma *atomarium, aurofrenatum, chrysopterum, radians, rubripinne, y viride*			
Parrot and Surgeon fish, and all in general	No-fishing areas in protected areas and fishing recovery zones	Honduras	1994-2019
Species associated with coral reefs	Protection and Conservation	Costa Rica*	2019
Scarus *guacamaia, coeruleus, coelestinus, vetula, taeniopterus, y iseri*	Species under special protection	México* (Caribbean coast)	2019
Sparisoma *viride, aurofrenatum, rubripinne y chrysopterum*			
Taxonomic families Acanthuridade, Scaridae Chaetodontidae, Pomacanthidae.	Ban	Guatemala* (Caribbean coast)	Amendment 2020
Taxonomic families Acanthuridade, Scaridae, Chaetodontidae, Pomacanthidae.	Ban	Colombia (Archipelago of San Andrés, Providencia and Santa Catalina)	2020

*Countries that have not yet signed or ratified the SPAW PRotocol

**Validity was for 2 years

Recommendations

Apply the precautionary principle, prevention and common but differentiated responsibilities according to the socioeconomic, ecological and political needs of each country or region when regulating herbivorous fish.

Comply with national and conventional regulations regardless of whether the species are associated with subsistence fisheries, commercial fishing, food sovereignty, trade in ornamental species or sport fishing.

Prioritize the international commitment to guarantee a healthy environment and intergenerational equity, integrating human rights as a fundamental pillar.

Specifically regulate the preservation of herbivorous fish essential for the health of ecosystems in a vulnerable state such as coral reefs.

Promote at the national and regional level regulations aimed at preserving herbivorous fish and coral reefs in the Greater Caribbean to improve the quality of life of the inhabitants of the region.

1 IPCC, 2019. Special Report: On the Ocean and Cryosphere in a Changing Climate Chapter 4: Sea Level Rise and Implications for Islands, Coasts and Low-lying Communities. Available en:https://report.ipcc.ch/srocc/pdf/SROCC_FinalDraft_Chapter4.pdf

2 Jackson JBC, Donovan MK, Cramer KL, Lam VV (editors). (2014) Status and Trends of Caribbean Coral Reefs: 1970-2012. Global Coral Reef Monitoring Network, IUCN, Gland, Switzerland.

3 Melanie McField, Patricia Kramer, Ana Giró Petersen, Mélina Soto, Ian Drysdale, Nicole Craig and Marisol Rueda Flores. (2020). 2020 Mesoamerican Reef Report Card. Disponible en: https://www.healthyreefs.org/cms/wp-content/uploads/2020/02/SmithReefs_RC19_Pages_BIL_f_E_LO.pdf.

4 AIDA, 2015. Guía de buenas prácticas de Regulación para la protección de arrecifes de Coral. Disponible en: http://www.aida-americas.org/es/publication/guia-de-buenas-practicas-de-regulacion-para-la-proteccion-de-arrecifes-de-coral.

5 Heron et al. 2018. Impacts of Climate Change on World Heritage Coral Reefs: Update of the First Global Scientific Assessment. Paris, UNESCO World Heritage Center. Available: https://unesdoc.unesco.org/ark:/48223/pf0000265625.

6 Arias-González JE, Fung T, Seymour RM, Garza-Pérez JR, Acosta-González G, Bozec Y-M. Bozec and C.R. Johnson. (2017). A coral-algal phase shift in Mesoamerica not driven by changes in herbivorous fish abundance. PLoS ONE 12(4): e0174855. https://doi.org/10.1371/journal.pone.0174855.

7 National Geographic, 2014. “To Save Coral Reefs, Start With Parrotfish”. Disponible en: https://blog.nationalgeographic.org/2014/07/02/to-save-coral-reefs-start-with-parrotfish/.

8 AIDA, 2015. Herramientas para la Pesca Sostenible. Capítulo 6. Ordenamiento Marino Costero. Disponible en: http://www.aida-americas.org/es/project/herramientas_pesca_%20sostenible.

9 ICRI, 2019. Recommendation on addressing the decline of herbivorous fish populations for improved coral community health throughout the Tropical Eastern Pacific, the Eastern and Western Atlantic, and the Greater Caribbean Region Disponible en: https://www.icriforum.org/icri-documents/ motions/recommendation-addressing-decline-herbivorous-fish-populations-improved-coral.

10 Artículo 11 Protocolo SPAW.