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Concerning Specially Protected Areas and Wildlife
(SPA)W) in the Wider Caribbean Region

RECOMMENDATIONS FOR CONSERVING THE NASSAU GROUPE



Recommendations for conserving the Nassau Grouper

A REPORT OF THE SPAW SPECIES WORKING GROUP

Task 4: “Develop priorities and strategies for regional collaboration on and implementation of management measures to improve protection of species listed under the Annexes of the Protocol.”

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Priority: Protection and conservation of the Nassau Grouper (*Epinephelus striatus*) in the Wider Caribbean Region

1. **Background:** The Nassau Grouper was added to the SPAW Protocol’s Annex III in 2017.
2. The Nassau Grouper (*Epinephelus striatus*) was once a species of considerable commercial significance to the Caribbean region, but over the last couple of decades, populations have declined by more than 60% due to overfishing. Both the number and size of spawning aggregations have also been significantly reduced, with remaining stocks overexploited and in some cases, commercially extinct throughout much of its geographical range.
3. As a higher level predator, the Nassau Grouper is ecologically important to reef ecosystems and also plays a crucial role in food security and sustaining the livelihoods for many countries of the Wider Caribbean Region. Species that aggregate to spawn such as the Nassau Grouper are particularly vulnerable to overexploitation due to their dispersal and migratory nature beyond national borders.
4. An initial call for regional protection of the Nassau Grouper was made in October 2008 during the 13th Session of the Western Central Atlantic Fisheries Commission (WECAFC). The subsequent

Caribbean Fisheries Management Council (CFMC)/WECAFC Regional Workshop on the Nassau Grouper (Cartagena, Colombia, October 2008), recommended a regional closed season as a best approach for conservation along with the establishment of regional collaboration on grouper research and management.

5. Following the SPAW Annex III listing in 2017, the WECAFC Spawning Aggregations Working Group (SAWG) held a workshop in 2017 and in 2019. SAWG prepared for submission to the WECAFC Commission, a draft Regional Fish Spawning Aggregation Fishery Management Plan: Focus on Nassau Grouper and Mutton Snapper (FMP).
6. The purpose of the FMP is to provide a template for conservation of fish that aggregate to spawn for the Wider Caribbean region. Harmonized planning between or among countries is necessary because of the transboundary nature of the species. To improve cross-sector collaboration necessary to address declining trends of mature individuals due to widespread fishing and impacts of climate change, the FMP identifies six objectives to improve regional management and conservation.
7. In addition, the 2017 SAWG workshop recommended the following possible actions to enhance Nassau Grouper conservation:

8. Coordination and Cooperation with Regional Fisheries Bodies

- Provide a framework and available opportunities to Parties to the SPAW Protocol, to work collaboratively with WECAFC, OSPESCA, CRFM, CFMC and CITES to implement management plans for the conservation of the Nassau Grouper as listed under the Protocol's Annex III.
- Ensure that recommendations from Working Group meetings and WECAFC Commissions are brought to the attention of SPAW Parties as well as to other relevant governing bodies, taking into account pre-existing management measures such as regulations concerning/during closed seasons.
- SPAW Parties should contribute to the development of national management plans.
- Promote the development of an Ecosystem Approach regional fisheries project for the Nassau Grouper and other species that aggregate to spawn similar to ECOLANGOSTA+ and in line with the CLME+ SAP Sub-Strategies.

9. Communication and Capacity Building

- Provide a website platform through the CEP/SPAW Regional Activity Centre (RAC) for compiling relevant outreach materials including mapping on the extent of known/existing spawning aggregation areas, and general links regarding information on these areas (e.g. Science and Conservation of Fish Aggregations (SCRFA), Project Goliath, Atlantic and Gulf Rapid reef Assessment Program (AGRRA) and Reef Environmental and Education Foundation (REEF).
- Working alongside the WECAFC Commission, promote an outreach and communication campaign on the potential regionally agreed closed areas and season.
- Develop a report card for WECAFC Member countries and Contracting Parties to the Protocol (similar to "Reefs at Risk") with a goal to track and report Fish Spawning Aggregations.

10. Linkages with the Caribbean Marine Protected Areas Managers Network and Forum (CaMPAM) under SPAW

- Promote a regional analysis of the overlap between existing and proposed MPAs

listed under the SPAW Protocol, spawning aggregation sites for Nassau grouper, and aggregations of other key aggregating species (given that the establishment of protected corridors and MPAs have contributed to the growth of spawning aggregations in some countries).

- Consider the development of an Ambassador Programme supporting local fishers in collaboration with relevant partners– this is with an aim to contribute to increasing awareness and involvement of fishers in the management of spawning aggregation.

- 11. Recommendation:** A specific sub-working group or specific task dedicated to the Nassau Grouper under the SPAW Species Working Group could be established to facilitate implementation of these recommendations and to enhance coordination with regional fisheries bodies such as WECAFC.

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Table 1: AGRRA data on Nassau grouper biomass and density for Caribbean countries. Data Year indicates different “batches” of AGRRA data that were included in calculations. For a full explanation on how biomass was calculated, refer to AGRRA Standard Product Metadata document. Asterisks (*) indicate countries that have not yet ratified SPAW. Guyana, Republic of Trinidad and Tobago, and Saint Lucia did not have any AGRRA data available (AGRRA, 2021). More recent data from other sources may be available.

SPAW Countries	Data Year	<i>Epinephelus striatus</i>	
		Biomass (g/100m ²)	Density (#/100m ²)
Antigua and Barbuda*	2005, 2017-18	12	0.02
Bahamas	2001, 2013, 2015, 2017-19	201	0.60
Belize	2018	14	0.02
Bonaire	1999	0	0.00
Cayman Islands	1999-2000	67	0.09
Colombia	2012	0	0.00
Costa Rica	1999	0	0.00
Cuba	2001	34	0.05
Curacao	1998	0	0.00
Dominica	2005	0	0.00
Dominican Republic	2003-2004, 2018	0	0.00
Grenada	2018-2019	0	0.00
Guatemala*	2018	0	0.00
Haiti	2015, 2018, 2020	0	0.00
Honduras	2018	29	0.02
Jamaica*	2000, 2005, 2012, 2014-15, 2018	0	0.00
Mexico*	2018	0	0.00
Navassa	2012	224	0.04
Nicaragua	2003	0	0.00
Panama	2002	21	0.02
Saba	1999	0	0.00
St Vincent and the Grenadines	2018, 2019	0	0.00
St. Eustatius	1999	0	0.00
St. Kitts	2011	0	0.00
St. Maarten	1999	0	0.00
Turks & Caicos	1999, 2018	208	0.16
United States	2003, 2004, 2006	30	0.02
United States, Puerto Rico	2003	39	0.02
United States, USVI	1998-2000	60	0.06
Venezuela	1999	0	0.00

Note: Recent AGRRA data show high biomass and density for countries like Bahamas (201 g/100m², 0.60 fish/100m²) and lower in Honduras (29 g/100m², 0.02 fish/100m²) and Belize (14 g/100m², 0.02 fish/100m²). Based on earlier AGRRA data, Navassa had high values (224 g/100m², 0.04 fish/100m²), while lower values were reported in areas like Cuba (34 g/100 m², 0.05 fish/100m²) and Panama (21 g/100m² and 0.02 fish/100m²). Note the number of countries with no Nassau grouper reported from recent and early surveys.

Map 1: AGRRA data on Nassau grouper biomass and density for Caribbean countries.

