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Sixth Meeting of the Scientific and Technical  
Advisory Committee (STAC6) to the Protocol  
Concerning Specially Protected Areas and Wildlife  
(SPA) in the Wider Caribbean Region

Cartagena, Colombia, 8 December 2014

**PROPOSAL OF THE UNITED STATES OF AMERICA FOR THE INCLUSION OF  
THE NASSAU GROUPER (*Epinephelus striatus*) IN ANNEX III OF THE  
PROTOCOL ON SPECIALLY PROTECTED AREAS AND WILDLIFE IN THE  
WIDER CARIBBEAN REGION OF THE CONVENTION FOR THE PROTECTION  
AND DEVELOPMENT OF THE MARINE ENVIRONMENT IN THE WIDER  
CARIBBEAN REGION**

*For reasons of economy and the environment, Delegates are kindly requested to bring their copies of the Working and Information documents to the Meeting, and not to request additional*



**Proposal of the United States of America  
for the inclusion of the Nassau grouper (*Epinephelusstriatus*) in Annex III of the  
Protocol on Specially Protected Areas and Wildlife in the Wider Caribbean Region of the  
Convention for the Protection and Development of the Marine Environment in the  
Wider Caribbean Region**

**Background:** Article 1 of the Protocol on Specially Protected Areas and Wildlife (SPAW) in the Wider Caribbean Region defines Annex III as “the annex to the Protocol containing the agreed list of species of marine and coastal flora and fauna that may be utilized on a rational and sustainable basis and that require the protection measures indicated in Article 11(1)(c).” Further, Article 11(1)(c) of the Protocol specifies that “each Party shall, in co-operation with other Parties, formulate, adopt and implement plans for the management and use of such species...”

The procedures to amend the annexes, contained in Article 11(4)(a), state that “any Party may nominate an endangered or threatened species of flora or fauna for inclusion in or deletion from these annexes,” and that, after review and evaluation by the Scientific and Technical Advisory Committee, the Parties shall review the nominations, supporting documentation and the reports of the Scientific and Technical Advisory Committee and shall consider the species for listing.

In accordance with these procedures, the United States proposes Nassau grouper (*Epinephelusstriatus*) for inclusion in Annex III of the SPAW Protocol.

We believe that the life history and migratory patterns of this species require a cooperative regional approach to conservation, as called for in Article 11(1).

The United States National Marine Fisheries Service (NMFS) on September 2, 2014, announced a 12-month finding on a petition from WildEarth Guardians to list the Nassau grouper (*Epinephelusstriatus*) as threatened or endangered under the Endangered Species Act (ESA). A status review of the Nassau grouper has been completed. After reviewing the best scientific and commercial data available, NMFS determined that the Nassau grouper meets the definition of a threatened species and proposed an ESA listing. The announcement contained a Biological Review added as Attachment A of this petition. Comments on the proposed listing will be accepted until December 31, 2014. After consideration of comments, NMFS will make a final determination as to whether to list Nassau grouper under the ESA and if so whether to list the species as endangered (currently in danger of extinction) or threatened (likely to become in danger of extinction within the foreseeable future).

Attachment B to this petition is the report of the First meeting of the CFMC/WECAFC/OSPESCA/CRFM Working Group on Spawning Aggregations, Miami, 29-31 October 2013. The Declaration of Miami, produced by the workshop participants, recommended *inter alia*, regional harmonized closed seasons for specific species known to aggregate for spawning (starting with Nassau Grouper and adding others as appropriate), collection and sharing of biological and trade data for the species and called for regional management and conservation of fish species that aggregate to spawn.

Of most interest to the Parties to the SPAW Protocol, the Declaration of Miami recommended “that WECAFC members propose the listing of species that aggregate to spawn (in particular Nassau Grouper and Goliath Grouper) under Annex III of the SPAW Protocol...”

Following is a short review of information on Nassau grouper (*Epinephelus striatus*) to support its inclusion in Annex III of the SPAW Protocol. More detailed information can be found in the Biological Report pursuant to the United States Endangered Species Act (Attachment A):

**Scientific Name:***Epinephelusstriatus* (Block, 1792)

**Common Name(s):** Nassau grouper, Cherna, Chernaciolla

**Geographic Range:** The Nassau grouper is found throughout the Caribbean Sea from Bermuda to southern Brazil. It is native to the following countries: Anguilla; Antigua and Barbuda; Aruba; Bahamas; Barbados; Belize; Bermuda; Cayman Islands; Colombia; Costa Rica; Cuba; Curaçao; Dominica; Dominican Republic; French Guiana; Grenada; Guadeloupe; Guatemala; Guyana; Haiti; Honduras; Jamaica; Mexico; Montserrat; Netherlands Antilles; Nicaragua; Panama; Puerto Rico; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Suriname; Trinidad and Tobago; Turks and Caicos Islands; United States (Florida); United States Minor Outlying Islands; Venezuela, Bolivarian Republic of; Virgin Islands, British; Virgin Islands, U.S.

**Ecological Interactions:** As a top predator in reef ecosystems, the Nassau grouper serves ecological functions that are still being clarified (Mumby et al. 2006). Its presence maintains grazers and grazing pressure on reef alga providing an important benefit to stony corals (Mumby et al. 2006). The predatory Nassau grouper may help limit the impact of the invasive lionfish but the evidence is far from conclusive at this time (Mumby et al. 2011). Its absence has been speculated to affect ecological release for smaller predators, including small groupers, with resultant changes in the trophic relationships in reef ecosystems (Mumby et al. 2012).

**Specific Habitat Requirements:** Similar to most reef fishes, the habitat of Nassau grouper changes as they grow. Very small Nassau grouper are found in macroalgal clumps, seagrass beds, and coral (Eggleston 1995, Dahlgren 1998) in nearshore areas at depths between 1-4m. Microhabitat of newly settled Nassau grouper was described as within coral clumps (*Porites* spp.) covered by masses of macroalgae (primarily *Laurencia* spp.) although often the habitat has simply been cited as *Laurencia*. The open lattice of these algal-covered coral clumps provided cover and facilitated the movement of individuals within the interstices of the clumps (Eggleston 1995). Recently settled Nassau grouper have also been collected from tilefish, *Malacanthusplumieri*, rubble mounds at 18m, with as many as 3 fish together (Colin et al. 1997). They have been reported as associated with discarded queen conch, *Strombusgigas*, shells and other debris around *Thalassia* beds (Claydon et al. 2010, Wicklund , pers. comm.).

Small juvenile Nassau grouper are common in shallow seagrass beds, macroalgae, and around clumps of *Porites* spp. coral as they begin to shift from settlement habitats or microhabitats (Randall 1983, Eggleston 1995). As juveniles grow, they move from inshore patch reefs offshore to progressively deeper fore reef areas. As adults Nassau grouper are classified as reef fish and they are found on reefs

throughout the Caribbean. They utilize the reef for shelter and therefore do not require live coral or living habitat, simply some structure such as reef crevices or artificial structures.

**IUCN classification:** The IUCN Red List of Threatened Species reports that estimates of country stock size of Nassau Grouper are rare, but also estimates current population size at >10,000 mature individuals with an estimated population decline of at least 60% over the last three generations (27-30 years). Because the estimated decline of 60% meets one of the IUCN criteria for a species at high risk of extinction in the wild, IUCN classifies the Nassau grouper as “endangered.” The IUCN first classified Nassau grouper as endangered in 1996; the most recent assessment occurred in 2003 and Nassau grouper retained the IUCN classification of “endangered.”

**Threats to the species:** The main threat to Nassau grouper is over-harvest, especially the targeted and heavy removal by fishing on the spawning aggregation sites. The species has largely disappeared as a commercially important fish in most countries in the region. The known number of spawning aggregations for the species has plummeted, some no longer form, such as Cat Cay, Bimini, the first one ever described to science (Erisaman et al. 2013), and Mahahual, Mexico (Aguilar-Perera, A. 2014), and all known remaining aggregations are at least 10-fold smaller in fish number than they once were.

**Usefulness of Regional Cooperative Efforts:** Nassau grouper are often targeted by fishers at known spawning aggregation sites. These aggregation sites are transient, site specific and are usually known by local fishermen who fish them intensely during the spawning period (Bolden, 2000). Nassau grouper are especially easy to catch at these times. Nassau grouper are known to migrate hundreds of kilometers, crossing jurisdictional boundaries, to reach these specific spawning locales.

The review above addresses the categories of information specified in Articles 11(4) and 19 (3) (a)-(g), except “(e) management and recovery plans for endangered and threatened species.” We are not aware of any relevant management or recovery plans in the United States or elsewhere.